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THE DOCTOR AND CANADA'S HEALTH PROGRAM[1]

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Ottawa Canada

In Canada's health history this is a memorable year. The national health program announced last month will mobilize each year $30,000,000 of the nation's financial resources to open new lines of advance for Canada's doctors while strengthening the entire structure of health services with which the Canadian doctor must work.

The black bag is still the symbol of the medical profession, but the discerning doctor must see himself and his services against the broad pattern of medical facilities that the Canadian community has developed to enable him to serve it better.

The history of medicine reflects the growing dependence of the doctor on the health facilities available to him. To the simple relationship between doctor and patient has now been added the diagnostic, hospital, laboratory and other facilities that have been developed to support the doctor in his work.

PLANNING FOR HEALTH ADVANCES

The national health program is of vital importance to every member of the Canadian medical profession. Largely because of your efforts, Canada has been a leader among the nations in the level of health services. Now, by its action in making medical science more abundantly available to all Canadians, this country is taking a great forward stride in this wide field of human endeavour.

As federal assistance is brought to the support of provincial health campaigns, new possibilities open for planned and integrated frontal attacks against disease. Not only will existing health programs be vastly expanded but new horizons will now be discovered.

> The national health program will have a great impact on Canada's health services. Its magnitude is seen in the fact that—apart from health services for Canada's veterans, and for Indians — *this $30,000,000 annual expenditure will equal Federal Government health expenditures during the past 27 years, and it will be nine times last year's expenditures.*

If we compare this Canadian program for federal health grants with the similar grant system in the United States, what

[1]An address presented at the Annual Meeting of the Canadian Medical Association in Toronto, Ontario, June 23, 1948.

do we find? *In most respects, on the basis of expenditure for each citizen. Canada's health grant program far exceeds that of the United States.* For example, this country will spend twice as much on hospital construction; three and one-half times as much for public health; our tuberculosis control grants will be nearly five times as large; our cancer grants fourteen times as large; and Canada will spend sixteen times as much as the United States on grants for mental health care.

I am convinced that Canada's health statistics a decade from now will prove that it has been a wise investment of this country's wealth in its own good health to put so much of its resources into the provision of more adequate health services. The high quality of medical practice in Canada has its foundation in a reasonably good level of health facilities. The national health program now makes possible a considerable increase in these facilities with the resultant improvement in the service that doctors will be able to provide.

The intimate relationship of the doctor to his community has given your profession a strong sense of community interest. Increasingly, organized medicine is taking part in the planning of community life. For example, towards the development of this national health program, the Canadian Medical Association has made its invaluable contribution. Dr. Heagerty — that great federal health official who pioneered in outlining the basic plans — had the advice, assistance and encouragement of the renowned "Committee of Seven", which spoke so ably for the Canadian Medical Association. Their best thinking was the foundation for much of the health proposals that the Dominion Government made to the provinces in 1945.

Recently, when the Federal Government was considering the implementation of the present program, the officers of the Department of National Health and Welfare and I had the benefit of the advice of Drs. Routley, Archer, Johnson and Kelly of the Economics Committee of your Association. And then, of course, the twice-yearly meetings in Ottawa of the Dominion Council of Health, representing all the provincial health departments, ensures among other things that the point of view of the medical profession is constantly kept before the Government.

On the important occasion of the first World Assembly of the World Health Organization in Geneva this month, the Department of National Health and Welfare was glad to invite Dr. Clarence Routley, the distinguished general secretary of your Association, to be one of the Canadian delegation — both on account of his own very special talents and because he knows so intimately the point of view of the Canadian medical profession. The Canadian Medical Association shares the honour recently conferred on Dr. Routley when he was elected the first chairman of the Council of the World Medical Association.

In Canada, health has always been, for the most part, a responsibility of the provinces. The national health program does not disturb this balance, but it will powerfully supplement health services that have already been brought to a high level by provincial departments of health. In a parallel drive towards the common objective of good health everywhere in Canada, the close cooperation of the federal and provincial governments should guarantee

the most effective utilization of the federal monies to be provided. After considering their relationship to an agreed and closely integrated national plan for health action, those programs should be supported that have been jointly approved as most likely to raise the level of the nation's health.

With this close federal-provincial partnership for good health and with these new financial resources to accelerate the drive against disease, we can confidently expect a steady united advance in all our health services. Now it is possible to move far beyond the early stages of health care in Canada to press on towards our ultimate goal—a positive state of good health for every Canadian.

No time is being lost to bring the national health program into effect. While awaiting the voting of funds in Parliament, a special meeting of the Dominion Council of Health was convened in Ottawa two weeks ago to work out cooperatively the conditions under which these health grants should be paid to the provinces.

This health program is so important to our welfare that I believe its detail should be familiar not only to members of your profession but also to everyone in Canada. You no doubt are aware of the divisions of the federal grants under three general headings:—

(*a*) Health Survey Grants.
(*b*) National Health Grants.
(*c*) Hospital Construction Grants.

HEALTH SURVEY GRANTS

The health survey grants will enable each province to carry out adequate studies of all its health requirements. First of all, it will be possible to chart provincial areas of health need so that the national health grants can be used most effectively. At the same time, large-scale surveys can be made of the relative shortages of hospital accommodation so that each province can recommend to the Federal Government those hospital construction projects that it considers to be of the most immediate importance.

These health survey grants will fill an important need in Canada for more accurate knowledge of the exact extent of our health needs. Our health programs cannot go beyond the level of our health information. At the present time, our knowledge of health conditions in Canada is far from adequate. In many fields, long-range planning has been made difficult by the inadequacy of our information.

NATIONAL HEALTH GRANTS

The national health grants constitute a significant eight-point program for health progress. As these grants will add to existing expenditures on health in Canada and will be given generally on the condition that existing expenditures be not reduced, it is evident that they will represent both a very considerable increase in Canada's health programs and—and this is more important—they will permit and encourage the expansion of all existing programs into entirely new fields of operation.

A short survey of these grants will indicate a few of the many possible lines of development that will now open up to members of the medical profession and to all who work in the public health field in Canada. It is easy for you to translate each new grant into terms of wider health services, better diagnostic facilities and all the other forward steps to create the highest possible level of health for all Canadians.

Public Health Grants: $4,400,000 to $6,500,000

The annual grant of $4,400,000 for general public health will widely extend the scope of present programs and enable personnel to be trained for work in the public health field. It is planned to increase this grant yearly until in four years it will reach $6,500,000—that is 50 cents more for every citizen than is now being spent.

With this financial support, the provinces will be able to have even more success in improving their child and maternity mortality rates; they will be able to take preventive action against blindness; they will be able to keep well under control diseases such as smallpox, diphtheria and typhoid; they will be able to open a vigorous drive against the great cripplers—polio, arthritis and rheumatism; and to extend and consolidate all their other public health advances.

Professional Training Grant: $500,000

As you so well know, one of the urgent needs in the health field in Canada is for more trained personnel. A number of the health grants under the new program will provide funds for this purpose, but, in addition, a grant of $500,000 has been made available for training of personnel for work in public health and for staffing the expanding hospital program. Those who have carried a very heavy burden in recent years may now look forward to have ample assistance in carrying out their responsibilities.

Public Health Research Grant: $100,000 to $500,000

In addition to the annual medical grant provided by the federal Government through the National Research Council, there will be a new grant to start at $100,000 a year and to increase to $500,000. By making this grant increase over five years, it will be possible for research facilities to develop gradually.

Any progressive program for public health must give the correct weight to the value of research. The cost of research is obvious, but we must always remember the dividends. We must remember insulin and diphtheria toxoid, sulpha drugs, the anti-biotics—all made possible by painstaking research effort.

Mental Health Care Grant: $4,000,000 to $7,000,000

One of Canada's most urgent national health problems is the prevalence of mental ill health. More time and effort must be given to the prevention, treatment and cure of the mental diseases that account for one-third to one-half of the hospital beds in use in Canada. It would seem that the pace and confusion of our civilization creates mental health hazards for our citizens. The new federal grants, which will start at $4,000,000 and rise over a period of years to $7,000,000 annually, will enable medical science to move beyond institutional care and carry more active preventive campaigns against mental ill-health into the community itself. This grant will also help to meet the urgent need for more skilled workers in the field of mental health.

Crippled Children's Grant: $500,000

The provision of a crippled children's grant to total $500,000 a year will now make possible greatly expanded plans to search out and to treat crippling conditions in children. Already excel-

lent work is being done in some provinces, and excellent programs have been laid out. This considerable annual grant will now make it possible for the fight against conditions that cripple children to go on at an accelerated pace. Provincial departments of health can develop more active campaigns for prevention of crippling conditions where possible and also for the treatment and rehabilitation of their victims.

Control of Cancer Grant: $3,500,000

The new health program also makes possible a really intensive nation-wide effort to lessen the ravages of cancer. To support and to develop all provincial programs against cancer, $3,500,000 will be available each year. This grant will make possible the mobilization of the special skills required to give the cancer victim his best hope of recovery through early diagnosis and expert treatment. This cancer control program complements but in no way supplants the intensive research programs now under way and which are so essential if we are to find out the cause and the correct treatment of this dread disease.

Venereal Disease Control Grant: $500,000

To assist the provinces in the control of venereal disease, annual federal grants of $225,000 have been made in recent years, but to intensify present efforts, the grant will now be raised to $500,000 each year.

Tuberculosis Control Grant: $3,000,000 to $4,000,000

In the past half century, great progress has been made in the eradication of tuberculosis from this country. But much remains to be done. The new health grant for tuberculosis control, which will rise from $3,000,000 in the first year over a period to $4,000,000 annually, should mark Canada's final chapter for this disease. With this grant to back up the excellent work now being done in all the provinces, it should be possible to make wider use of the latest advances in medicine, and the latest techniques in prevention and cure.

HOSPITAL CONSTRUCTION GRANTS

The federal action to make available to the provinces up to $13,000,000 a year for hospital construction grants, over a period of at least five years, will provide an important incentive to hospital construction. The shortage of hospitals is one of Canada's most pressing health problems. The inadequacy of hospital facilities—especially in our rural areas—has placed an added burden on many of your profession.

Every province has been asked to make a thorough survey of its hospital needs. The hospital construction grants are available to help build new hospitals and might also be utilized to make such special arrangements for rural and sparsely settled areas as the building of nursing stations or health centres. The level of health services for rural Canada should be greatly raised as the result of these grants. In the larger centres the grant will stimulate retarded hospital construction and alleviate many acute shortages of hospital beds.

The hospital pattern in Canada is the outgrowth of individual action and self-reliance. Our hospitals have been established and operated as self-sufficient units. But in many instances they have been developed without regard for each other or for the overall need of the area

which they serve. These hospital construction grants should enable a planned and integrated hospital construction program on a province-wide basis with particular reference to regional needs and to the type of hospitals required. This will help provide good medical care for Canadians regardless of where they live.

CANADA AS A HEALTH LEADER

Canada's great national health program adds impressively to health services that are already well founded on all levels of government. There are, of course, many elements for good health in Canadian life. The climate, the sturdy pioneer stock, the generally high level of living, good nutritional habits and the availability of good food—all these pre-dispose Canadians to good health. In addition, we owe much to the proficiency and high professional standards of the Canadian doctor. The standing of the Canadian medical profession is widely recognized. Here in Toronto, for example, doctors engaged in medical research and public health work have given world leadership in improvements and in entirely new developments in medical science.

It is clear then that it is from a fairly high level of health that we can now look forward to further progress. The quality of the health services that have been developed by the federal government, by the provincial and municipal governments, and through the efforts of the national voluntary health agencies, have given Canada world-wide prestige in many fields of health activity. Already Canada has come a long way in this century towards good health. This has been most strikingly indicated by the fact that life expectancy at birth has increased nearly an entire generation since 1900, and in the past decade alone four to six years have been added to the life-span of our children.

When the national health program is approved by Parliament, many projects that you have long advocated will now become possible for the first time. This program will give a tremendous impetus to research, to preventive medicine, to the rapid expansion of hospital accommodation and to better health services generally. More attention must be given to all those environmental aspects of good health that are connected with housing, nutrition, sanitation, recreation, and economic and working conditions.

With the continued advance of medical science and its application through your profession in Canada, and with the constant improvement and enlargement of federal, provincial and municipal health services, I believe that this new health program will mark an important turning point in our efforts to overcome all that leads to ill health and to remove the barrier that keeps Canadians from enjoying a positive state of good health.

OUR CHALLENGE TO HEALTH PROGRESS

As this national health program can help all Canadians to better health, it is of importance to all. But to your profession especially, which has as its highest objective the raising of our health levels, this program is especially important. In thinking through the plans to expend these funds as effectively as possible, the Department of National Health and Welfare must depend, in great measure, on the considered opinion of your profession. Your ideas will influence your provincial health author-

ities who will have the responsibility, in the closest co-operation with the federal government, of making this program work.

I can assure you that I and all the officers of the Department of National Health and Welfare will continue to make considerable demands on the time and the advice of many of you in the Canadian Medical Association, in order to have always before us the views of the members of your profession.

The medical profession has done a distinguished job in Canada. With each new advance in medical science, members of your profession have redoubled their efforts to put into their daily practice the new techniques that have been discovered. As a fair return for medical advances in other countries, they have made their own important contributions to world medicine. With high traditions of professional competence and of professional service, Canada's doctors will find in this national health program increased opportunities to bring Canada into the front rank of all nations that are effectively furthering the good health of their peoples.

The success of the national health program—and we are determined to make it a resounding success—will depend on the wholehearted co-operation and good-will of your profession. This program is Canada's challenge to health progress. In the advances that it makes possible, we must look to your profession for leadership. These advances will not be easy but the energy, the spirit and the devotion of the Canadian medical profession is our warranty that you can lead us far beyond present levels of health achievement as you bring to all Canadians the heritage of good health.

BALFOUR LECTURE

The attention of the students, particularly in the upper years in medicine, is directed to the Donald Balfour Lecture in Surgery which will be given on Wednesday, November 10th, at 4 p.m. in Convocation Hall. On this occasion the University community will be privileged to hear a distinguished surgeon from the Sabbatsberg's Hospital in Stockholm, Professor C. Crafoord.

Dr. Crafoord will discuss lung function tests with particular reference to their value in determining the indications for thoracic surgery. Dr. Crafoord is an internationally known worker in this field and his choice of subject should insure a wide interest not only for students of surgery but for physicians, physiologists and other workers in the basic sciences.

Lectures and laboratory classes will be cancelled on that afternoon at 3:45 p.m.

CLINICAL ANATOMY OF THE BRONCHOPULMONARY SEGMENTS, PART I

MISS ALLENE I. SCOTT, 4T9

Until relatively recent times the anatomy of the lung consisted of a cut-and-dried statement of the lobar divisions of the lung, and the bare outline of the pulmonary vasculature. However, with the advent of the work of Nelson, Neil and Foster-Carter and, more recently, Brock, Boyden and Appleton, the more detailed study of the lung structure has been undertaken to answer the needs of clinical findings. This paper is an attempt to give a co-ordinated account of the anatomy of the lung, in particular, that of the bronchial tree and to correlate this with some clinical conditions that lend themselves to ready analysis in the light of these studies.

The introduction of the identity of the bronchopulmonary segments is the important advance in the study of the anatomy of the lung. This so-called segment is not only an anatomical unit, but a pathological one as well. The segment may be defined as a section of lung parenchyma more or less completely separated from contiguous segments by fibrous septa and supplied by a bronchus of the second order of division. Attempts have occasionally been made to speak of broncho-vascular segments but such a unit is too variable. The arteries it is true follow the bronchi intrasegmentally, but the veins are intersegmental and interlobar in distribution, and even in the arterial pattern one commonly finds arteries crossing foreign segments or arising in anomalous positions.

Consequent to the description of these bronchial segments and the growing familiarity with them, various surgeons have begun substituting segmentectomy for lobectomy and pneumonectomy when such a plan has been feasible. They can thus remove portions of the lung for such a condition as bronchiectasis and leave relatively normal tissue still functioning, whereas before this time, the surgeon would have performed either a pneumonectomy — removing both normal and diseased tissue —or a lobectomy—leaving some diseased tissue still in the body.

The study of the segments has advanced to the stage where radiologists can identify which segments are or are not involved in a disease, by using antero-posterior, lateral and oblique X-rays. In addition to the study of the peripheral segments affected, they can utilize bronchography with the instillation of lipiodol to study the pattern and integrity of the bronchial tree. Finally, the introduction of bronchoscopy—the visualization of the interior of the bronchial tree—has enabled specialists actually to locate the involved portion of the lung. All these methods, used in conjunction with one another, have made possible great advances in the diagnosis and treatment of diseases of the lung.

SURFACE ANATOMY OF THE LUNG

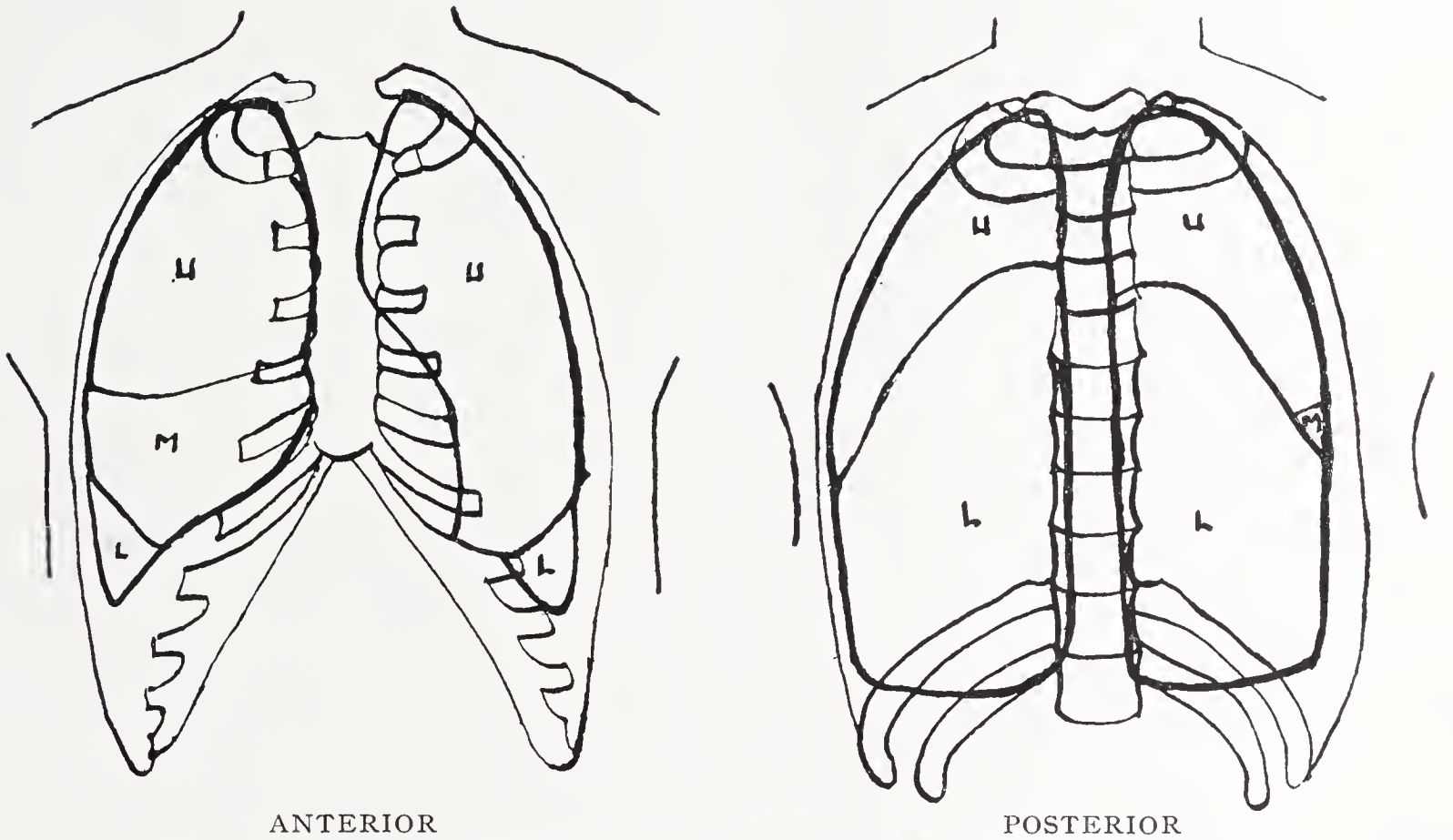
To form a background for a discussion of the segments, we will speak first of the surface anatomy of the whole lung and its main lobes. First it should be stated that, as pointed out by Brock,

the true level of a fissure is lower than is commonly thought, due to the fact that the deep pleural surface of the locating rib is at least two inches from the skin surface. This point is of importance in the surgical location of lesions which often prove to be lower than one would think from the surface anatomy.

As illustrated in Fig. 1, the lung reaches at its apex to the level of the neck of the first rib, being higher and more anterior on the right side. The anterior border of the lung descends to cross the sterno-clavicular joint and continues down retrosternally to the level of the sixth costal cartilage, whence it swings laterally along the sixth rib to cut the seventh in the mid-clavicular line, the eighth in the mid-axilla and to reach the spine posteriorly at the level of the eleventh thoracic spinous process. On the left the lung begins to swing laterally at the level of the fourth costal cartilage due to the presence of the heart.

DIVISIONS OF THE LUNG

The whole lung is subdivided into lobes of varying constancy. On the right, there are usually three, namely, upper, middle and lower lobes, although the first pair may be fused. On the left there are two, an upper and a lower lobe. These lobes are separated by fissures which are not always complete. In Table I are listed these fissures together with pertinent data.



ANTERIOR POSTERIOR

Fig. 1. Diagrams of the Lungs and Their Lobes (adapted from Brock).

To this regular number of lobes may be added others; not additional lung tissue, but segments whose septal walls have become separated by pleural invaginations giving supernumerary lobes. Their particular occurrence will be mentioned with the discussion of segmental anatomy. Only one anomalous lobe does not conform to this description—the azygos lobe of the right side. It is formed when the azygos vein fails to reach the medial side of the developing lung and is left suspended by a pleural mesentery that cleaves the apex at a

TABLE I

LUNG FISSURES

Hemithorax	*Fissure*	*Interlobar Site*	*Location*	*Degree of Fissuring*
Right	Oblique	Separating upper and middle lobes from lower lobe.	Begins at 5th rib level posteriorly and follows line of 6th rib anteriorly.	Incomplete posteriorly 60%.
	Horizontal	Separating upper from middle lobe.	Extends from point at which 6th rib crosses mid-axilla anteriorly along 4th rib.	Complete 12% Partial 67% Absent 21%
Left	Oblique	Separating upper and lower lobes.	Begins at 4th rib posteriorly and follows 6th rib to front.	

variable site depending on how far medially the vein was able to pass. It is recognizable in an X-ray as a comma-shaped density in the right apex.

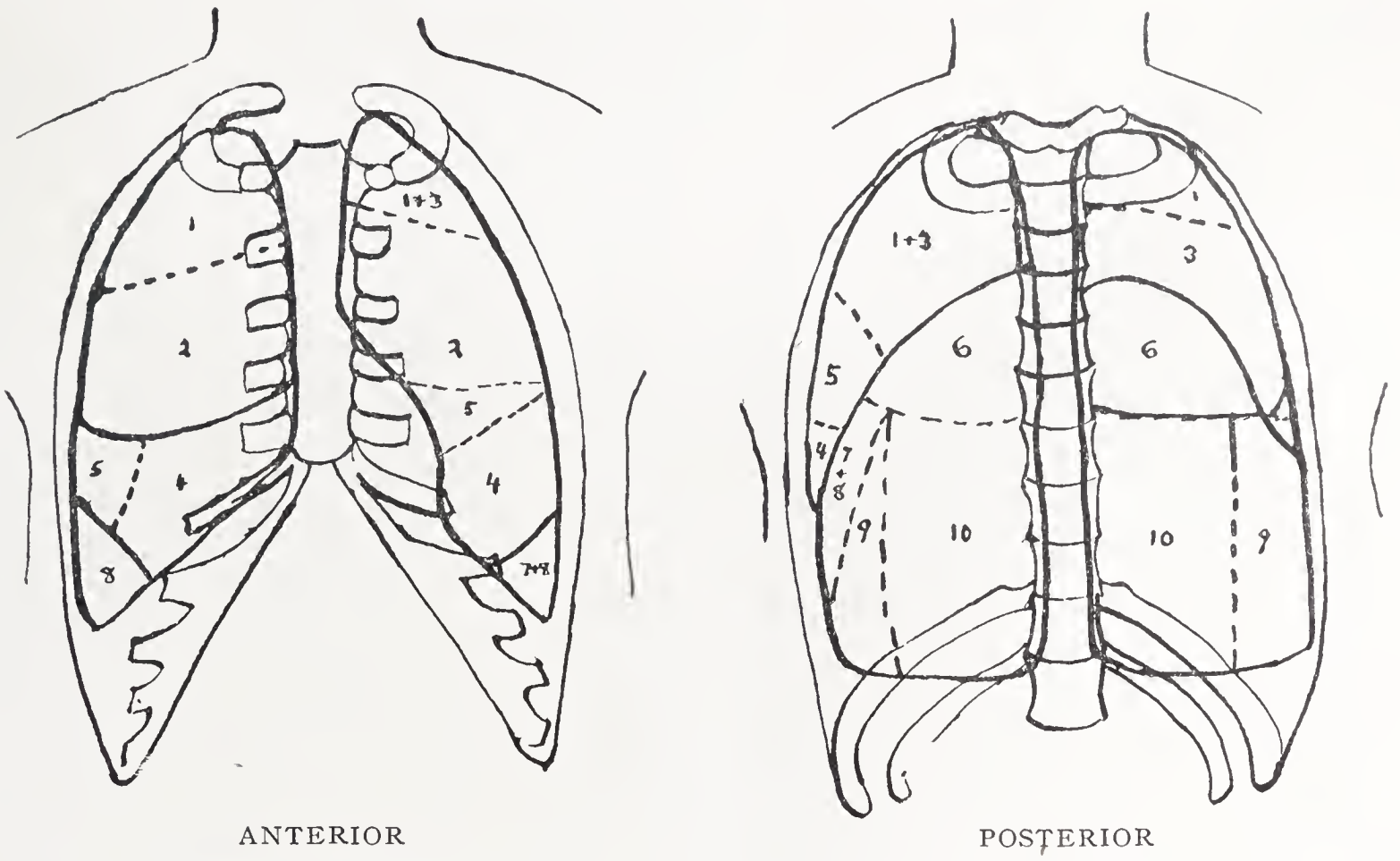
The lobes themselves have been divided into smaller units again—the segments. These are supplied by tertiary bronchi, the constancy of whose presence, direction and general area of supply has been repeatedly verified both anatomically and clinically. The nomenclature advanced by Jackson and Huber has been used here (Table II) because it seems to be the simplest and most indicative of location.

The segments may be identified at the periphery, in their natural state by the presence of rudimentary fissures, occasional well-defined septa, or selective collapse; or artificially by the injection of a coloured material such as methylene blue, or by inflation with air. In

TABLE II

NOMENCLATURE OF LUNG SEGMENTS

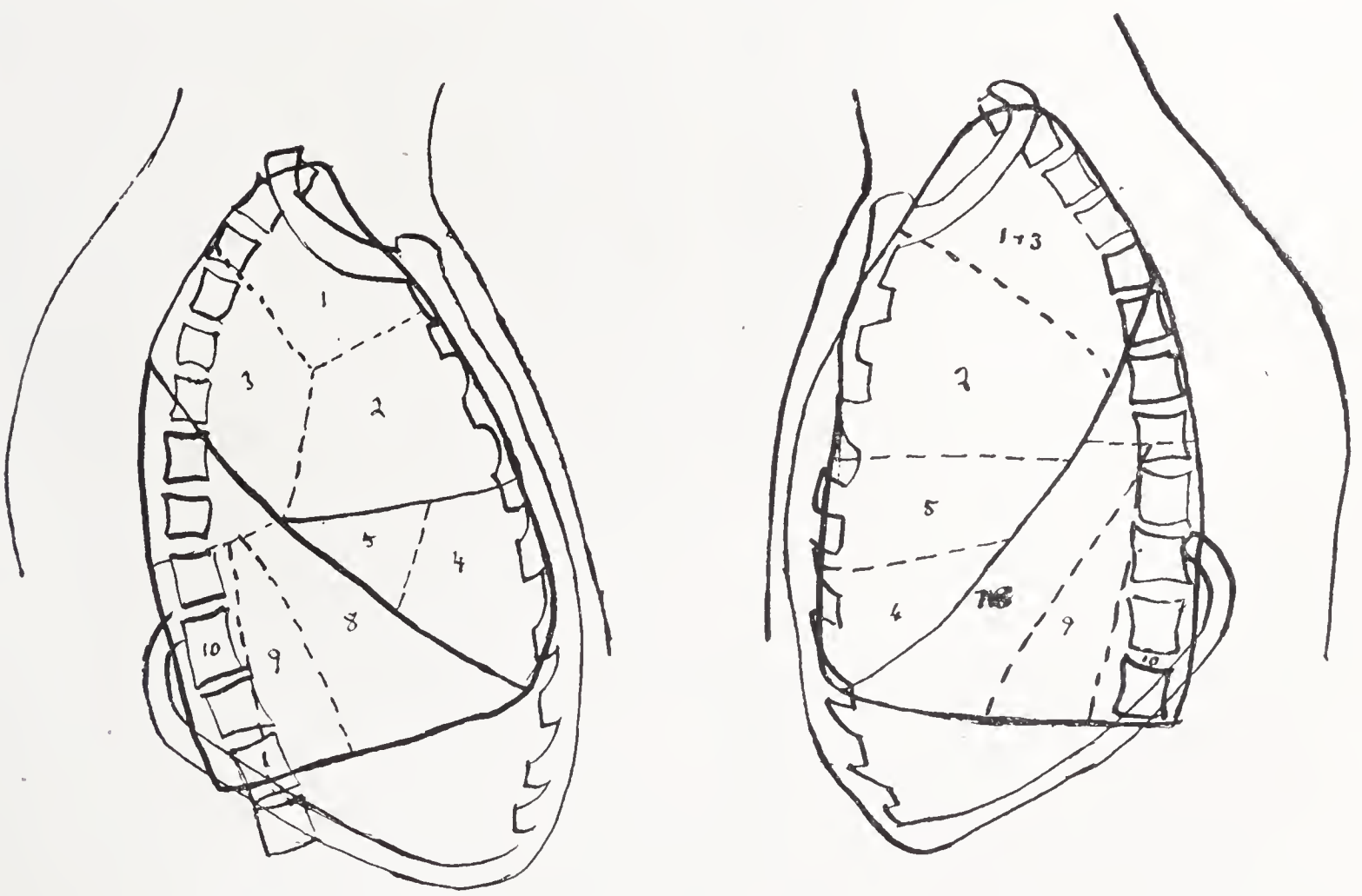
Lobe	*Right*	*Left*
Upper	1. Apical	1 & 3. Apical-Posterior
	2. Anterior	2. Anterior
	3. Posterior	
Middle	4. Lateral	4. Lingula-Superior
	5. Medial	5. " Inferior
Lower	6. Dorsal	6. Dorsal
	7. Anterior Basal	7 & 8. Anteromedial Basal
	8. Medial "	9. Lateral
	9. Lateral "	10. Posterior
	10. Posterior "	



ANTERIOR POSTERIOR

Fig. 2. Diagrams of the Lung Segments (adapted from Brock)

figures 2 and 3, we have shown views of the thorax to illustrate in a general way the location of the segments. We will proceed now to discuss the way in which the secondary bronchi supply these units.



RIGHT LEFT

Fig. 3. Diagrams of the Lung Segments (adapted from Brock)

RESPIRATORY TREE IN THE THORAX

The bronchial tree and its mode of branching is fairly constant. Supernumerary bronchi are rare, and usually are found to be regular bronchi whose origins have been shifted to new sites.

The trachea descends in the midline to a level usually stated as that of the fourth thoracic vertebra, but, actually, is often as low as the seventh vertebra when the living patient is in a supine position. At this point it bifurcates into right and left stem bronchi. The right bronchus both as to size and direction is considered to be the continuation of the trachea. It passes laterally, to the right, at a 25° angle to the midline and deep to the superior vena cava and pulmonary vessels. After a one-inch course it gives off the bronchus to the upper lobe from its supero-lateral surface. In contrast, the left stem diverges to the left at a 45° angle to the midline and continues for a distance of about two inches before its bifurcation.

1. Right Upper Lobe

The right upper lobe bronchus ascends at right angles to the main stem for about half an inch and divides ultimately to give three branches (apical, anterior and posterior) although the mode of division varies from a trifurcation (commonly) to a bifurcation with either the first or last pair arising by a common stem. The apical branch continues the ascent to supply the apex. The posterior bronchus diverges postero-laterally to its segment, whilst the anterior bronchus passes antero-laterally at a 90° angle to both the above-mentioned bronchi, and supplies the large anterior segment. Importance is attached to the fact that the two last-named segments both have large interlobar surfaces, in contrast to the apical segment. Hence interlobar empyemata often complicate diseases in these segments.

2. Right Middle Lobe

In an antero-posterior X-ray this lobe is superimposed on the lower lobe and is in turn covered by the anterior segment of the upper lobe. Between the point of origin of the upper and middle lobe bronchi there is a distance of one inch. This length is grooved above by the upper pulmonary artery branch and below by the inferior pulmonary branch, superficial to these again is the superior pulmonary vein. The middle lobe bronchus arises from the anterior aspect of the stem bronchus and passes downwards and laterally parallel to the anterior bronchus of the upper lobe. An important fact to note here is the origin of the dorsal bronchus of the lower lobe from the posterior aspect of the main bronchus, almost opposite the origin of the middle lobe bronchus, usually just below but occasionally just above it. Such a relative position makes the middle lobe subject to infection with the drainage of the dorsal segment. In addition, both the bronchi are peculiarly liable to obstruction by lymph glands draining the area, with resultant collapse and infection. The middle lobe bronchus divides after a half-inch course into medial and lateral branches that still keep parallel to the anterior bronchus. Some investigators have called attention to the fact that the lateral segment is of a characteristic triangular shape, whilst the medial one is of a quadrangular shape. The arrangement of these segments will be found to be different to that of the lingula, the corresponding lung area on the left.

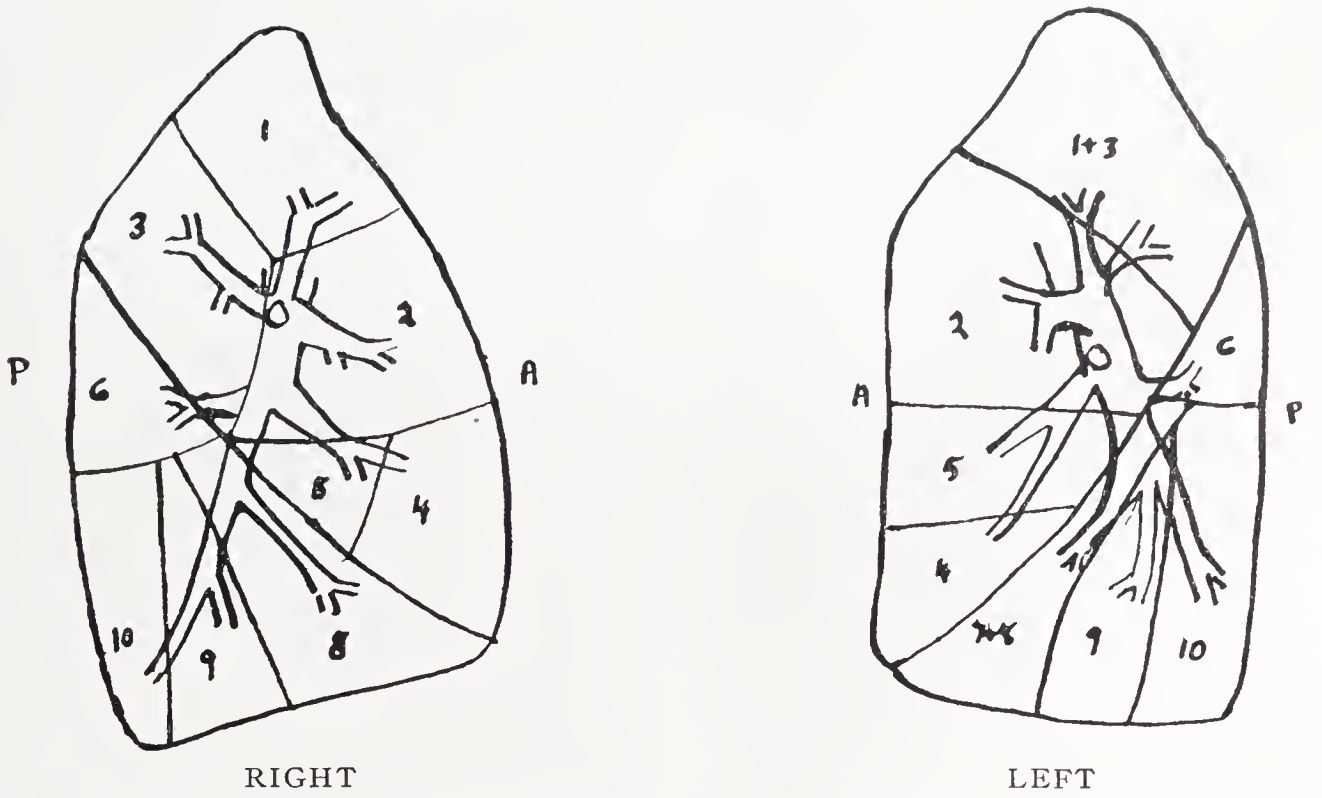


Fig. 4. Lateral Views of the Disposition of Bronchial Tree (adapted from Brock)

3. Left Upper Lobe

The bronchus of this lobe is not an offshoot of the stem as on the right but is the upper component of a bifurcation. It extends laterally for half-an-inch before dividing into an upper and a lower (lingular) branch. The former immediately divides into three components, following the patterns mentioned for the right upper lobe, although the apical and posterior branches are commonly associated and their area of supply considered only as one segment, and a small one at that. The anterior segment, on the other hand, is very large. Its bronchus does not parallel the lingular branch but is directed more anteriorly. The anterior bronchus of both sides may arise from the middle lobe (lingula) branch, and may be involved with it in bronchiectasis.

4. Lingula

This area, supplied by the inferior division of the upper lobe bronchus, is a large tongue-like process, frequently separated by rudimentary fissures from the rest of the lobe. It is generally agreed to correspond to the middle lobe of the right side. Its bronchus divides into superior and inferior branches. The segments supplied are thus disposed differently than on the right. Occasionally the right side is found to resemble the lingula in its segmental arrangement but the reverse is never true. The lingula's claim to importance lies in the fact that it is involved in 80% of left lower lobe bronchiectasis.

5. Lower Lobes

In the case of the lower lobes, the bronchial patterns of the two sides resemble one another sufficiently to provide a basis for the description of both together.

The lower lobe bronchus passes downwards, laterally and backwards. Its general course is easily recognized in a bronchogram. The branches may be

divided into dorsal and basal groups. The dorsal consists usually of one branch (sometimes two) arising from the posterior aspect of the main stem almost opposite the middle lobe bronchus on the right or about half-an-inch below the upper lobe bronchus on the left. The segment is a large, pyramidal area, often separated by a fissure from the rest of the lower lobe. If this fissure be present, it joins the oblique fissure at the same level as does the horizontal one. Its bronchus, artery and vein can readily be found posteriorly in the oblique fissure.

Between the origin of the dorsal bronchus and the branching of the basal bronchi is a distance of almost an inch. The first branch on the right is the mediae-basal one supplying the so-called cardiac segment which may be a separate lobe. It arises from the antero-medial surface of the stem. Just below it, the anterior bronchus arises from the antero-lateral aspect and is directed parallel to the middle lobe bronchus. On the left side these two basal bronchi arise by a common stem, and the medial one is not accorded the dignity of supplying a separate segment. The remaining stem then bifurcates into a lateral and a posterior bronchus. The latter is usually considered to continue in the curved direction of the main stem, which is approximately parallel to that of the dorsal bronchus, whilst the lateral branch runs parallel to the posterior bronchus of the upper lobe. All four basal segments have surfaces on the basal aspect of the lung; the dorsal segment does not appear. The dorsal, antero-medial and usually the lateral segments, but not the posterior one, appear on the interlobar surface.

(To be concluded)

AUTONOMIC NERVOUS SYSTEM

Relation of the Frontal Lobe to the Autonomic Nervous System in Man. Rinkel, Greenblatt, Coon, Solomon: Arch. Neurol. Psych. **58**, 570-581 (Nov., 1947).

Clinically, post-lobotomy patients demonstrate symptoms relating to the autonomic nervous system: sudden falls in blood pressure, decreases in blood sugar level, changes in gastro-intestinal functions, sudden outbursts of rage, trembling, perspiration, and occasionally angio-neurotic edema. Experimentally, electrical stimulation of the orbital surface of the frontal lobes in cats and monkeys has inhibited respiration, raised blood pressure and decreased the tonus of the gastric musculature. Bilateral removal of the frontal lobe in the cat is followed by symptoms of sham rage.

In this study, the autonomic systems of an experimental group of 95 post-lobotomy patients and of a control group, which included 52 hospital patients, were stimulated with epinephrine hydrochloride intravenously (0.05 mgm., 1: 1,000). The experimental group showed a rise in systolic pressure of 42.7 mm. above that of the control group, a rise in pulse pressure of 34.5 mm. above the control group level and an increase in pilomotor reactions. The possibility that these reactions were due to elimination of vagal inhibition was ruled out after stimulation of the carotid sinus which produced an incidence of maximal cardiac reaction in the lobotomy group about twice that of the control group. It is suggested that there is cortical representation of the autonomic nervous system in the prefrontal area and that extirpation of this area liberates the parasympathetic from cortical inhibition. After lobotomy, autonomic equilibrium is eventually established at a new level.

A. C. Parkin

ALLERGY IN RELATION TO OTOLARYNGOLOGY[1]
PART I: HISTORY TAKING

GEORGE C. SNELL, M.B., D.L.O., TORONTO[2]

THE term "allergy" was introduced by von Pirquet in 1906 and means literally "changed or altered reactivity." As applied to man, it encompasses a wide variety of hypersensitive states and syndromes clinically manifested as asthma, hay fever, eczema, urticaria, angioneurotic edema, migraine, gastro-intestinal disturbances and possibly other disease entities as well as a variety of conditions associated with tuberculosis, scarlet fever, other infectious diseases and rheumatism.

At least two of the following criteria must be positive before one can say that a patient is allergic:

1. **Clinical History** must conform to an allergic pattern—The onset is early in life, that is before the twenty-fifth year. There is a history of exposure followed by reaction. Thus, gastro-intestinal or bronchial symptoms may follow the ingestion of certain foods, asthma or rhinitis follow contact with feathers, or there may be a seasonal rhinitis or hay fever.

2. **Manifestations** must be allergic—These may include, for example, migraine, erythema or edema of the skin of mucous membranes, excessive mucus secretion and/or spasm of the bronchial, gastro-intestinal, or vascular smooth muscles.

3. **Family History** positive for allergy.

4. **Skin Tests** positive for sensitivity to certain allergens.

Once it is determined that the patient is allergic, the physician must next embark upon a search for the protein or proteins directly responsible for the allergic symptoms. The specific offender can often be discovered by careful observation and by the use of elimination diets. The importance of history taking in the investigation of allergic patients, however, cannot be overemphasized. In general, there is considerable lack of uniformity and a variance of method and detail in history taking. It is necessary to question these patients closely if there is any suspicion of an allergic disease and the patient is so interrogated as to enable the physician to obtain pertinent information to assist in the diagnosis of such cases. The type of history elicited from an allergic patient is dependent upon the chief complaint and upon the manifestations of the individual case and, thus, it is approached according to his symptoms.

The following is a general outline that might be considered for a history of an allergic patient:

A. CHIEF COMPLAINT

1. Principal Symptoms.

2. Minor Symptoms which are related to allergy.

3. Other Symptoms which have caused distress recently.

[1]Adapted from an address delivered to the Canadian Otolaryngology Society at Alexandria Bay, N.Y., June 21, 1948.

[2]Senior Demonstrator in Otolaryngology, University of Toronto.

B. PAST HISTORY OR PERSONAL HISTORY

1. General Information: age, sex, marital status, occupation.

2. Family History.

3. Previous Illnesses and Operations: include dates, and, in cases of operations, name of surgeon, etc.

4. Functional Enquiry: skin, head, eyes, nose, ears, throat, teeth, mouth, glands; respiratory, gastro-intestinal (including liver and gall bladder), and genito-urinary systems; muscles, and bones and joints.

5. Diet: breakfast, lunch and dinner; effects of alcohol, tea, coffee, and tobacco.

C. ELABORATION OF CHIEF COMPLAINT

1. Description of Typical Attack: time of onset (day, month, year), whether the onset was sudden or insidious, or associated with a major attack.

2. Cardinal Symptoms and whether there was any accompanying fever or pain.

3. Frequency and Duration of Attack: whether the symptoms are constant or in terms of daily, weekly or monthly recurrences, or associated with non-specific factors.

4. Seasonal Factors. For example, hay fever occurring from the middle of August to the frost is usually attributable to the ragweed. When the symptoms occur between May and July, the grasses and plantain have to be considered. The tree-pollen season extends from February to May usually. Seasonal symptoms may also follow the ingestion of seasonal foods such as berries, peaches and other fruits, certain seafoods, or holidays such as Thanksgiving and Christmas. The possible relation of symptoms to the harvest of hay or grains or other rural activities must likewise be considered.

5. Climate and Geography: Symptoms may be related to geographical changes (various sections of the country, mountains, coastal regions, etc.), of to the climate (dry, damp, warm or cold).

6. Weight Loss: recency and period over which weight loss occurred.

7. Appetite: relation of appetite to symptoms and attacks.

D. ENVIRONMENTAL CONTACTS

1. House or Home: whether there have been any recent changes in living quarters, duration of living in present location, type of heating and air-conditioning, insulation, drafts, dusts, fumes, floors, furniture, methods of cleaning floors and furniture, whether attacks occur in various locations in the house, any suspected rooms, pets, mice, insects, flowers, fertilizers.

2. Bedroom: whether the patient always sleeps in the same room, sleeping alone or with another person, rooming alone, pillow, mattress (type of covers, if any, type of filling), bedding, curtains, rugs, ventilation, plants in bedroom.

3. Grounds: flowers, weeds, livestock, poultry, barns, etc.

4. Neighbourhood: time living in present location, travel, trees, plants, weeds, insects, fields, factories, smoke, odors, similar cases in the neighbourhood.

5. Occupation: antigenic surroundings, persons and animals contacted, ventilation, fumes, foodstuffs, chemicals, leather, rubber, clothing, soaps, flowers, perfumes, cosmetics, plants, fabrics, yarn, epidermals, special types of dusts, plastics, indoor or outdoor work.

6. Surgery of the nose and throat or otherwise pertinent to the patient's allergy including dates, types of operations, reasons, complications, etc.

7. Effects of temperature, wind, rain, chilling, fog, dampness, storms, etc.

8. Bathing Habits: whether shower or tub, soap, dusting powder, towel, relation of symptoms to bath.

9. Contact with Other Persons including cosmetics, wearing apparel (old and new), beauty parlors, shopping, etc.

10. Hospitalization.

E. NON-SPECIFIC FACTORS

1. Intermittent Infections or foci of infection, with or without fever, but without associated allergic manifestations; and complications.

2. Gastro-intestinal Upsets.

3. Emotional and Physiological Disturbances including menstruation, pregnancy and menopausal symptoms.

4. Trauma or Exertion.

F. FOODS

Eating habits, foods liked and disliked, foods avoided, size and frequency of meals, effects of meals on symptoms, suspected foods, vitamins, nutritional value of diet, types of diets used,

gain or loss of weight, effects of not eating, appetite associated with gastro-intestinal distress, etc.

G. DRUGS TAKEN

Frequency of ingestion of drugs, dosages, routes (oral, local, parenteral); drugs giving relief, drugs not giving relief, drugs containing acetylsalicylic acid; headache tablets, laxatives, sedatives, analgesics, etc.; whether the patient has taken sulphonamides, penicillin or streptomycin; types of nose drops used; any known drug sensitivity.

H. PREVIOUS INVESTIGATION AND TREATMENT

1. Sensitivity Tests: foods, inhalants, pollens, molds, fungi, etc.

2. Treatment with antigens (vaccines) or antisera including frequency of injections, length of course of treatment, improvements or other results, reactions, etc.; and other forms of treatment.

3. Hospitalization, X-rays, and Other Special Laboratory Studies.

I. OTHER MANIFESTATIONS OF ALLERGY

Other possible manifestations of allergy should be enumerated and a positive or negative history for each indicated. The following should be included: asthma, allergic rhinitis, bronchitis, hay fever (Spring, Summer, or Fall), gastro-intestinal symptoms, migraine, food allergy, drug allergy, angioneurotic edema, urticaria, atopic dermatitis, contact dermatitis, fixed drug eruptions, idiosyncrasies, fungus allergy, ocular manifestations of allergy, cerebral manifestations of allergy (including epilepsy), genito-urinary symptoms, etc.

J. FAMILY HISTORY

Any manifestations of allergic reactions in other members of the family, immediate or otherwise, including parents, brothers, sisters, grandparents (maternal and paternal), aunts, uncles and cousins.

K. INITIAL IMPRESSION

List in order of importance, the various allergic manifestations and indicate other previous manifestations by placing history after the diagnosis.

In addition to those suggested by the above, generalized outline for history taking, one has to bring in supplemental specific questions dealing with selected allergic manifestations. Of course, these questions have to be selected and directed to the patient, depending upon the patient's various symptoms and other co-existing, additional, allergic manifestations, because, many times, there are multiple manifestations of allergy. These supplemental questions are of particular value in connection with occupational allergies as well as with other systemic allergic involvements.

(To Be Concluded)

PARKINSON'S DISEASE

The Use of Benadryl in Parkinson's Disease. J. Budnitz: New. Eng. J. of Med. **238**, (25) 874-875 (June, 1948).

The symptomatic treatment of paralysis agitans has heretofore been largely confined to the use of the atropine series of drugs. In this study benadryl was given to eight such patients, all of whom were in the arteriosclerotic group, in doses of 200 mgm. daily in four equal doses. In all cases the original medication by stramonium or scopolamine or "rabellon" tablets was continued with the benadryl but great improvement occurred with the supplementation of the latter drug: walking improved, swallowing became less difficult, drooling disappeared, sleep improved, hypertonicity diminished and heat tolerance improved. Another anti-histaminic drug, pyribenzamine, was tried but symptoms were aggravated. A rationale is offered for the mechanism of action: in addition to an atropine-like action of benadryl, it has been observed that animals intoxicated with benadryl have congestion of the choroid plexus which may thus improve the circulation of the corpus striatum, a region where symptoms of Parkinson's disease are initiated.

A. C. PARKIN

A SURVEY OF MEDICAL SERVICES IN TRINIDAD AND TOBAGO

MISS AGNES RAMCHARAN, 4T9

TRINIDAD and Tobago, a British crown colony, belongs to the chain of islands known as the West Indies, stretching from Florida to Venezuela. Trinidad is the most southerly of the islands and lies about twenty miles from the mainland of South America.

Although, in many respects, the state of health in the colony cannot be compared with that in temperate countries, yet improvements in the control, prevention and treatment of diseases have helped to raise the standard of the health of the masses there during the past few years.

It has been reported that the state of health in the colony during 1945 was not much different from that during previous years. Recently, however, progress has been made in the control of malaria and in the treatment of the cutaneous lesions of leprosy. Infectious diseases have been brought under greater control but venereal and helmintic diseases still cause a considerable amount of ill-health, while the incidence of typhoid fever ranges as high as 300-400 cases annually. Death due to tuberculosis continues to be very high.

Rural and housing conditions have improved, but the need for improvement is not yet fully satisfied, especially in urban areas where poor and insufficient housing are hindering improvements in health.

VITAL STATISTICS

In 1945, the estimated population of the colony was 558,048, and the population density, 281 per square mile. The birth rate was 39.15 per 1,000 and the death rate, 14.42 per 1,000. The infant mortality rate was 83.87 per 1,000. The birth rate has been increasing within recent years while the infant mortality rate has been decreasing. The principal causes of death in the colony are the diseases of early infancy, old age, diarrhea and enteritis, and cardiac and valvular diseases (aneurysms, auricular fibrillation, arterio-sclerosis, and mitral and aortic incompetences).

PUBLIC HEALTH

Mental Diseases

The St. Ann's Mental Hospital, which is the government institution for mental diseases, has proper accommodation for 700, but the average number of resident patients far exceeds this. Thus the general accommodation of this hospital continues to be inadequate. Electric shock therapy was started in 1945.

Nutritional Diseases and Dental Caries

Dental caries continue to be widespread as do minor deficiencies of the vitamin B complex, calcium and iron.

Dietary and clinical surveys of urban and rural school children have been made to correlate some of the clinical signs of malnutrition with actual dietary deficiencies. A controlled experiment with skimmed milk was started in 1945. One hundred children, a random sample, were clinically examined, weighed and measured. Fifty were then given 2 ounces of skimmed milk powder daily

while the other fifty were kept as controls. Both groups were re-examined at intervals. After four months, clinical examination showed definite improvements in some of the skin lesions in the group receiving the milk powder not observed in the control group.

Communicable Diseases

The more extensive use of penicillin has resulted in greater control of the infectious diseases. The more important communicable diseases are chickenpox, leprosy, malaria, tuberculosis, typhoid fever, venereal diseases, whooping cough and yaws. Helmintic diseases are still common on the island.

Leprosy

Treatment centres for leprosy consist of a leprosarium on the island of Chacachacare and seven clinics on the mainland of Trinidad. Examination of reported or suspected leprous cases takes place at the clinics and the cases found to be infectious are transferred to the leprosarium unless satisfactory isolation at home is possible. The latter rarely takes place. Non-infectious cases are kept under observation and treated at the clinics. A limited examination of contacts is made by two field nurses.

At the leprosarium, which accommodates about 300 patients, treatment includes additions to the diet, such as yeast, and medication with promin and diasone. A general improvement in the state of the patient is shown by the better appearance of the skin, less tendency to ulceration, improvement in weight and a more cheerful disposition.

The number of cases of leprosy in the colony is estimated to be between 1,500 and 1,800. At the present time, the law provides for the compulsory segregation of infectious cases.

Malaria

The number of deaths reported as being due to malaria is still quite high (424 during 1945). The Rockefeller Foundation and the Trinidad Government, working together, carried out a programme of research under the following three headings: (*a*) malarial studies, (*b*) anopheline investigations, and (*c*) control measures. During 1945, 3,526 children were examined for splenomegaly and 1,425 blood films prepared for parasitic examination. The anopheline investigations were carried out by means of specially designed traps. Experimental spraying of the inside walls of houses with DDT was done. It was found that there was an appreciable fall in the incidence of splenomegaly in all areas where such control measures were carried out.

Tuberculosis

This disease is still one of the major causes of death in the colony and accounts for 6.9% of all deaths. Most of the cases are pulmonary. At the present time, a sanitarium, complete with X-ray rooms, a dental clinic, a dispensary and other necessary facilities, is being constructed for the accommodation of 248-256 patients.

The Tuberculous Association provides and staffs a clinic in Port of Spain, the capital of Trinidad, and gives milk and cod liver oil to necessitous cases.

Typhoid Fever

Typhoid fever continues to be endemic in the colony.

Venereal Diseases

A venereal disease control division was established by Lieut.-Col. O. C. Wenger, U.S. advisor on venereal disease control, with the help of the combined American and British staffs. The program is at present being carried on by the Health Department of the colony. The Caribbean Medical Centre is the headquarters of the division. There, a screening clinic is provided at which a blood test for syphilis, a miniature X-ray of the chest and a general physical examination are offered to the general public free of charge. This has proven to be an effective means of finding cases of venereal disease as well as of tuberculosis.

The more commonly found venereal diseases in the colony are syphilis, gonorrhoea, chancroid, lymphogranuloma venereum, and granuloma inguinale. Yaws, another spirochaetal infection, is still a serious cause of invalidism.

Penicillin has been introduced as a form of treatment for syphilis and gonorrhoea. Public education regarding the venereal diseases is being provided by means of lectures, films, and pamphlets.

HYGIENE AND SANITATION

Preventive measures are being carried out for mosquito and other insect-borne diseases. Control measures for *Aedes* and *Anopheles* mosquitos are being undertaken. Rabies control, in 1945, entailed the destruction of 902 *Desmodus rufus* bats. None was found infected upon examination. No cases of human rabies were reported.

The water supplies are controlled by the Central Water Distributing Authority which delivers water of a satisfactory standard of purity to the areas served by it. Some parts of the colony, however, still depend upon stored rain water, wells and ponds.

Sewerage control consists of a water carriage system in Port of Spain and private septic tanks in some rural areas. In most of the country districts, however, antiquated facilities still exist.

Measures are being taken to spread knowledge of hygiene and sanitation. These consist of special lectures and health films and the organization of sanitary squads. At present, efforts are being made to prevent hookworm, malaria and the social diseases, and to control fly breeding.

HOUSING

The housing shortage, as in most countries of the world, is acute, especially in the towns.

HOSPITALS

The colony has three government colonial hospitals situated at Port of Spain and San Fernando, Trinidad, and Scarborough, Tobago. In addition, there are six district and two emergency hospitals as well as St. Ann's Mental Hospital.

MATERNITY AND CHILD WELFARE SERVICES

The largest towns, Port of Spain and San Fernando, possess maternity departments in their hospitals. Maternity cases are also admitted to the District Hospitals. Ante-natal Clinics are held at the various hospitals and expectant mothers attend these satisfactorily.

LABORATORY SERVICES

A few of the examinations and tests done in the Government Laboratories include the routine examination of water, the examination of bats for Negri bodies, the examination of rats for evidence of the plague, Kahn and Kline tests for syphilis, the examination of feces for hookworms and *Entamoeba histolytica*, and the examination of scrapings from skin lesions and nose swabs for *M. leprae*. Vaccines and sera are prepared in the laboratories, chief among them being typhoid, gonorrhoeal and anti-rabies.

MEDICAL SERVICES

At the present time, there is a shortage of medical practitioners on the islands, especially in the Government Service. However, many students are abroad studying at medical schools in various countries and it is hoped that, on their return, the situation will improve.

The standard of medicine practised in some of the hospitals in the colony compares favourably in some respects with that practised in similar institutions abroad. Occasionally, a few of the graduates take time off for refresher courses in foreign countries.

With the establishment of a West Indian University in Jamaica, which will be opened this year, the standard of education in the West Indies will be raised considerably. The University offers, at present, a two-year pre-medical course and it is hoped that a medical course will be provided in the near future.

RESEARCH

In July, 1948, the Microbiological Institute was opened in Trinidad. It is the first of its kind in the British Empire and its purpose is to conduct research along agricultural and medical lines utilizing certain tropical materials.

DIGITALIS ASSAY

A Comparative Study of the Intravenous Pigeon and the Intravenous Cat Methods in the Assay of Digitalis. H. A. Braun and L. M. Lusky: J. Pharm. Exp. Therap., **93**, (1) 81-85 (May, 1948).

Pigeons were studied as possible substitutes for cats in the biological assay of digitalis. They are abundant, readily available in all parts of the country and one of the least costly of all laboratory animals.

The procedure used in this study was patterned after that described in the *United States Pharmacopoeia* for assay on cats. The end-point of the reaction is cardiac arrest, followed by dyspnea convulsions and death. Assays were completed on 30 preparations of digitalis by both the intravenous pigeon method and the U.S.P. cat assay. Assays were made simultaneously using the two methods.

Statistical analysis of the potencies of digitalis preparations as determined by the two methods reveals the absence of any significant difference. In the majority of assays the percentage differences between the two methods are $\pm 12\%$ or less. Also it was shown that not only are pigeons more consistent in a given assay than are cats but various batches of pigeons seem to vary less from each other than various batches of cats.

It is expected that the results of the pigeon method would show a similar agreement with the human assay, because Gold and co-workers have demonstrated that the results of U.S.P. cat method parallel assays on humans.

Miss H. A. P. Marcroft

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EDITORIALS

IT IS UP TO YOU!

Twenty-five years, a quarter of a century in the life of the Journal, have passed. Those years since the introduction of this, the first undergraduate medical journal to be published on this continent, have seen it follow a course of progress, although not without regressions, toward the goal envisaged by the original Editorial Staff when they wrote: "If interest and cooperation are sustained, we can look forward to the day when the Journal will be an institution of which the Faculty of Medicine will be proud and which, we hope, will carry far afield, without discredit, the name of the University of Toronto." It should attain a status amongst its contemporaries which is in keeping with the high position attained by the Faculty of Medicine of our University amongst the medical schools of the world. This year, we shall endeavour to further the progress of the Journal toward that goal, as well as to continue the good work commenced by our immediate predecessors—the Staff for Volume XXV.

To produce a journal of such a standard and also of present and future interest and value to so diverse a group of readers—which range from students just commencing premedical studies to graduates practicing one of the specialties—is no small task. It is not an impossible one, but it does require the interest and cooperation of all the undergraduates—both premedical and medical—and the assistance and advice of the alumni and members of the faculty who are interested in the Journal and in its attainment of that goal.

To the students, we would say that we feel that the JOURNAL has a definite place in this Faculty and, with your help, we will attempt to make it an even more useful acquisition to the medical student's literary equipment. The two-fold purpose of the JOURNAL today is unchanged from that set forth by its originators: to encourage the preparation and writing of papers by students, and to bring to the attention of every student important medical articles and accounts of recent research appearing in the current literature. This is your journal and we predict for it the success which can be attained only by your cooperation in its production and in submitting to us your ideas, your recommendations and your criticisms. Remember that we, the Staff of the JOURNAL, are only a group of students from all years who have been asked to assume the responsibility of producing an undergraduate medical journal which conforms as closely as possible to the desires and interests of all the students in this Faculty. How well we shall succeed in fulfilling that responsibility depends upon the degree of interest and cooperation displayed by each one of you. In ultimate analysis—it is up to you!

It will be the policy of the present Editorial Board to make the JOURNAL as effective a medium for student expression as possible. We feel that success rests on such a policy, and we have faith that we shall be able to encourage in the students a more articulate spirit. It is manifestly not possible to publish a journal of contributions solely by faculty members, nor do we believe it advisable to make it a medium for student expression alone. Only in the wise combination of the two can a secure future be assured for the JOURNAL. It is only by having a wealth of material from which to select that a high standard of excellence can be attained. This policy should encourage the development of literary tendancies among the students and we believe that to develop medical writers for the future is important.

A student who spends sufficient time reading and collecting the literature on a given subject can prepare just as valuable a paper for his fellow students as a busy member of the faculty. The value to the student of preparing such an article is inestimable. It gives him an insight into, and an understanding of that particular topic which are always a source of great benefit and satisfaction. In addition, it gives him an opportunity to gain experience in medical writing for which, in the years to come, he may be very thankful. Consequently, we urge our promising undergraduate contemporaries to put pen to paper and write!

If you lack the interest or the desire, or feel that you truly cannot afford the time—and it does require time—to write a paper for the JOURNAL, then consider contributing an abstract of some article in the current literature which interests you and which you consider to be of sufficient importance to bring to the attention of your fellow students.

If you know of a topic which should be dealt with in the JOURNAL—suggested, perhaps, by listening to a lecture or a clinic, by reading a text, or by performing a laboratory experiment—and you do not feel inclined to investigate it personally, at least bring it to the attention of a member of the JOURNAL Staff. There will be several of them in every class and they will relay your suggestion to the Editorial Board who will give the topic due consideration and then, possibly, recommend it to a

student who is interested in that subject and who would like to write it up, or to a member of the faculty who is well qualified to discuss it.

The JOURNAL Staff is being greatly enlarged this year with the hopes that, in consequence, a greater opportunity will be provided for those students who are really interested in the JOURNAL to take a part in its preparation, to contribute to its pages, or to express their ideas, recommendations, or criticisms regarding it, and therefore, that this publication truly will be the students' medical journal and reflect the medical interests and ideas of all the members of all the years. The results depend on you, the students in this Faculty of Medicine!

To the medical alumni, we would point out that one prediction written in the very first number of this JOURNAL has failed to develop as it should have: "as time goes on, a valuable Alumni connection should be established." Apart from those of you who have joined the teaching staff here, few have contributed to the advancement of the journal which, once, was yours, and for which, it was hoped, you would retain some interest following graduation. We realize that this is difficult once you are out of direct contact with the University and are busy with your own practices, but we would greatly appreciate your suggestions and advice and if, perhaps, you have time to prepare it, an article. Look back upon the days when the JOURNAL was yours. How could it have been improved so as better to have fulfilled its purposes for you? Remember, too, the days when you were undergraduates. Tell today's medical students, of your experiences since then which have added to your understanding and appreciation of what you learned during those years. Tell them, too, about what you have learned of the practice of medicine, of its specialties, and of its allied arts and sciences—the fields of human endeavour which they, like you, have chosen to be their life's work.

From the members of the faculty, we beg help and cooperation. Only by the presence of names of maturity and authority in our tables of contents, can we offer sufficient excellence to our readers. May you not withhold your aid, but, rather, assist us toward a higher standard of medical literature. We sincerely thank those members of the teaching staff whose help in the past has very materially assisted in bringing the JOURNAL to its present position of advancement. In asking for a continuance of their aid, we would suggest to the others, "go, thou, and do likewise."

Thus, we urge everyone, students, alumni and professors alike, to give us their wholehearted support in our effort for the still further advancement of THE UNIVERSITY OF TORONTO MEDICAL JOURNAL toward a position which is in keeping with that of our Faculty of Medicine. It is up to you!

"Knowledge and wisdom, far from being one, have oft-times no connection. Knowledge dwells in heads replete with thoughts of other men, wisdom in minds attentive to their own. Knowledge is proud that he has learned so much. Wisdom is humble that he knows no more."

—*Cowper*

CANADA'S NATIONAL HEALTH PROGRAM

THE FOURTEENTH of May, 1948, marked a memorable occasion in the history of health services in the Dominion of Canada. On that day, the Prime Minister announced a program annually to provide more than $30,000,000 in support of the health campaigns being carried on by each of the nine provinces. It heralded a new era of health services in Canada. It will accelerate progress in in our fight against disease. It is an important step in the establishment of a national minimum of social security and human welfare for the people of Canada.

The program does not overlook the fact that, constitutionally, the health of the people is primarily a provincial responsibility. The administration of the expenditure of the money which it provides will remain entirely under the jurisdiction of the provinces, but it ensures that accurate knowledge of the exact extent of health needs will form the basis of their actions.

The health grants will be allotted under eight headings: public health, public health research, professional training, mental health care, assistance to crippled children, control of cancer, control of venereal diseases, and control of tuberculosis. In this way, they will provide for the principal needs in the advancement of Canada's national health.

During the first five years, the program will provide $13,000,000 each year for the expansion of hospital accomodation. The shortage of this accomodation represents one of the most pressing health problems facing Canada today. It is expected that these grants, along with matching grants from the provinces, will help to provide more than 40,000 additional beds.

Although the new health program does not indicate the beginnings of national hospital and medical care plans, it does make them a future possibility. Health experts have reported that, throughout the Dominion, the hospital accomodation must be greatly increased, the entire health structure must be strengthened and extended, and the number of public health personnel must be increased before a national health insurance plan can be successfully introduced in Canada. The National Health Program provides the financial backing for all of these prerequisites and in addition, it provides what has been characterized as "a new deal for health in Canada."

Consequently, to those who have chosen to prepare to enter the medical profession, this program is of vital importance because it will have a powerful influence on the shaping of the medical "world" into which they will be entering upon graduation and in which they will be practicing during the years to come. Not then, but now, is when every medical student should think about this program and its immediate and future effects. In this issue, therefore, we have published the address given by the Honourable Paul Martin, Minister of National Health and Welfare, which outlines the doctor's place in Canada's National Health Program, and which he originally delivered to the Annual Meeting of the Canadian Medical Association last June. We recommend it for your serious and thoughtful consideration. Think of this program with active interest, not passive acceptance. It will influence your future in the practice of medicine—whether for better or for worse, is your decision.

FEATURE

THE LIBERTY OF THE FREE MIND[1]

H. WASTENEYS, PH.D., F.R.S.C.[2]

MR. CHAIRMAN, Mr. President, Mr. Dean, Ladies and Gentlemen, in replying to this toast I must first express, on behalf of my colleagues on the Faculty, our thanks for your kind invitation to this banquet and the pleasure we feel in celebrating with you, your anticipated graduation. Our pleasure is mixed with some regret, however; the regret we, who have watched your growth in knowledge and wisdom during the past six years and who have made many good friends among you, the regret we cannot help feeling at your impending departure.

The proposer of the toast was good enough to say some kind and complimentary things about us and I wonder if you can appreciate how we of the faculty more than reciprocate these sentiments. Those who are so blessed by fate as to be permitted to spend a fair portion of their lives as members of a faculty of medicine are among the most fortunate of men. For this there are many reasons, and not the least of these is the happiness of experiencing a perennial refreshment, from sharing for six years the intellectual adventures of wave after wave of eager youth, so that even those among us in the last decade of our allotted span have lost little, or none, of our joy in living and of our zest for spiritual and intellectual exploration.

In speaking on behalf of the faculty to the graduating year on occasions such as this it is the custom to indulge in a certain amount of avuncular advice, to quote, perhaps, from Polonius in Shakespeare and from similar admonitions to youth embarking on life's career. One such quotation occurs to me, from a novel which was much read in my father's generation. It was written by the great Jewish Prime Minister of Queen Victoria, Benjamin Disraeli. The novel is Contarini Fleming. Baron Fleming is advising his son, Contarini: "Young men," he says, "are apt to get a little abstracted, and occasionally to think that there is something singular in their nature, when the fact is, if they were better acquainted with their fellow-creatures, they would find they were mistaken." He goes on to give a great deal of advice as to how this misconception may be overcome and among it occur the following sentences:—

"Talk to women," he says, "talk to women as much as you can. This is the best school. This is the way to gain fluency, because you need not care what you say, and had better not be sensible."

This quotation shows how much our manners have changed in three generations. Who would dream of giving such advice to a young man today?

You may remember that I talked to

[1]The Reply to the Toast of "The Faculty" given at the Graduation Banquet of the Class of 1948.

[2]Professor of Biochemistry and Head of the Department, University of Toronto.

you six years ago about some aspects of the history of civilization. Much history has been made in the intervening years. The values which have guided our Western Civilization in the past, values which it seemed six years ago were endangered from without by the assault of Nordic paganism and from within by a spreading neglect, are today again in even greater danger because they are now being assailed and forcibly replaced, in Europe, by Slavic anti-godism and a brutal authoritarianism.

It is important, then, that youth and age reflect on all these values and it is moreover worth-while for us Canadians, who are sometimes importuned to forget our British origins, to reflect on the part Britain has played in fostering and disseminating those Christian values which have, in the main, guided our western civilization, so we thought, towards what H. G. Wells in his *Outline of History* described as "That final unification of the world's affairs towards which all history is pointing." It is worth-while to reflect on this English tradition in which we Canadians, English and French alike, yes and Canadians of other European origins and English-speaking Americans, too, have been nurtured. It is important to do so in these days, when the greatness of Britain as an Empire-builder and as a great naval and military power, when her leadership in industry and her economic supremacy are waning. It is important to remember her greater tradition, which we share, of a continuous literature of more than 1200 years, a literature which is, after all, the most notable contribution which she has made to western civilization, a literature to which Canadians have contributed and which has played a noble part in the traffic of European culture.

It was more than 1200 years ago, as H. A. L. Fisher, in his *History of Europe* has said, that "the British peoples, emerging from their northern mists, made their first great contribution to the advancement of civilized life in the larger world." The long roll of great Englishmen opens at the beginning of the 8th century with the name of a scholar and missionary, the North-umbrian monk Bede, of whom it was written (by Boniface) "We, labouring to plant the seeds of the Gospel among the wild and ignorant Germans, beg you to send us something of the writings of Bede the monk, who of late was shining among you like a lantern with knowledge of the scriptures." Bede's contribution was made during the last of the great Mahomedan invasions when Europe was faced, as she is faced today, with the threat of destruction of her Christian culture.

May I mention another great Englishman who, 200 years later, but again in dark years of invasion, determined (to quote Ifor Evans) "that the life of the mind should survive"? It was in the midst of this invasion that King Alfred continued his work for the development of learning in England. He forecast the motivation of the modern scientific mind when he wrote "Therefore he seems to me a very foolish man and very wretched, who will not increase his understanding while he is in this world and ever wish and long to reach that endless life where all shall be made clear."

It was in this tradition that our Canadian universities were able, almost alone among the universities of the United Nations, to maintain their courses in

the humanities during our late great struggle in defence of freedom.

Let us not dwell, for it will not profit us, on the material greatness of our past but let us *not* forget that traditionally we have been, as Ifor Evans called us, the "Missionaries of the Free Mind". Among our many cherished liberties which are now endangered, not only by alien forces from abroad but from sources, unnoticed, in our midst, for us, members of a university, the greatest and most precious must be, the liberty of the Free Mind. Our Chaucer, our Shakespeare, our Milton and our Yeats, these and a hundred others have clothed, in their drama and verse and prose, a vision of the liberty of the Free Mind, in beauty everlasting.

I must not stop to say more about the contributions that British writers have made to European culture and Christendom. You know the names. You can conjure up for yourselves these visions of our real greatness.

Perhaps I may express best and most concisely what I am attempting to recall to you, by relating how, in 1940, a friend, in discussing what values in civilization we were then fighting for, said "So far as I am concerned, I am fighting to preserve the contents of the *Oxford Book of Verse*. . . . . That book is, I believe, one major expression of the only kind of thing worth fighting for."

I would not have you think, however, that in this changing world we can be content to reflect only on the past, for there are many old values to be discarded and new values to be created, if we have the vision to create them, just as there are long-forgotten values in our Christian heritage to be recaptured before we can sight that goal of world social unity which is civilization.

That great social philosopher, the late Professor Urwick, once wrote "All of us who are in any way thinkers, teachers, guides, are at fault. We have not yet discovered that the human world is new and calls for a redefining of old truth. Nothing vague will serve. The old shibboleths may be sound enough. Brotherhood, love and sacrifice hold all the universe of good in their embrace, but they are tired; repetition has worked them too thin to grip and hold us. We must remould their eternal verity in much more detailed and intimate shapes today."

For this, ladies and gentlemen, we shall need the Free Mind.

It is then, in the confident belief that she will continue, as she has in the past, to be a champion of this liberty, that I ask you to rise, and drink a toast with me to Our University.

A SURGEON'S LIFE

A Surgeon's Life. Sir Heneage Ogilvie: Lancet, July 3, 1948.

This is the published form of the Rutherford Morison lecture delivered at Newcastle on May 5. In it, this surgeon to Guy's Hospital discusses the life of a surgeon; his personal responsibility; the meaning of specialization in surgery; the measure of greatness of a surgeon; the selection and training of surgeons and the integration of knowledge in this field.

Such an article should be read in its complete form and we recommend it to all undergraduate students interested in the fundamental differences between the physician and surgeon. The points are deftly handled and the article should provoke worthwhile discussion.

Miss H. A. P. Marcroft

ABSTRACTS

MEDICINE

The Neuro-humoral Aspects of Peptic Ulcer Formation. J. Wener, H. E. Hoff: Canad. Med. Assn. Jl. **59**, 115-140 (Aug., 1948).

The essence of the ulcer problem consists of two distinct, but closely related processes: that which initiates the ulcers, and that which is responsible for the progression of these lesions to the chronic form. Thus far, the observations of the numerous investigators relating to this problem have only partially answered the question of the pathogenesis of peptic ulcer. Although it has been clearly demonstrated that vascular alterations leading to local tissue anoxemia and necrosis are the most important factors in the initiation of erosions and ulcers, the lesions produced have rarely if ever gone on to chronicity. The repeated vascular insults induced by the experimental methods employed by numerous investigators, although severe enough have been relatively transitory in nature and thus it has not been possible to reproduce sustained reflex nervous disturbances in dogs, comparable to those suspected to occur in man due to long-lasting emotional conflicts. Although erosions or acute ulcers occur frequently in man, comparatively few people develop chronic peptic ulcer. Most of these lesions heal rapidly, and it has also been shown that chronic peptic ulcers heal as rapidly as the acute ulcers when the state of sustained emotional conflicts was removed.

These observations offer a physiological basis for the neurogenic concept of ulcer formation and re-emphasize the importance of marked circulatory disturbances in the initiation of acute gastro-intestinal lesions ranging from mucosal hemorrhages to erosions and ulcers. This also fits the psychosomatic concept of ulcer formation, which regards the appearance of ulcers as the pathological sequel to the imbalance of the autonomic nervous system created during sustained emotional conflicts.

Miss J. E. Wood

Hemophilia: Current Theories and Successful Medical Management in Traumatic and Surgical Crises. C. S. Wright, C. A. Doan, V. A. Dodd and J. D. Thomas: J. Lab. and Clin. Med., **33**, (6) 708-721 (June, 1948).

Current theories are reviewed, the evidence for each theory being cited briefly. The suggested etiological factors are: (1) an inherent increased stability of the platelets; (2) an excess of an antithromboplastic substance; (3) a defect in (*a*) a thromboplastic precursor or (*c*) antihemophilic globulin. The authors suggest that the ultimate solution of the problem may well be a compromise between the individual hypotheses.

The classical criteria for the diagnosis of true hemophilia include: (1) familial history of the symptoms of hemophilia; (2) personal history of variable difficulty in controlling hemorrhage, especially following trauma; and (3) demonstration of a prolonged coagulation time of venous blood. To these may be added the therapeutic test of the shortening of the coagulation time after parenteral administration of one of the antihemophilic globulin-containing substances.

An active antihemophilic principle has been shown present in non-hemophilic blood under certain conditions: (1) whole blood or plasma when relatively fresh; (2) reconstituted frozen or lyophilized plasma treated within a few hours after withdrawal from donor and (3) the concentrated unit of powdered plasma fraction I of Cohn, which when redissolved in distilled water has a protein-equivalent of 60-75 cc. of plasma and an antihemophilic activity of 10-15 times the comparable volume of plasma from which it came. The intravenous or intramarrow route of administration of any of the above substances is preferred to the intramuscular route.

The authors describe in detail four cases in which one or more of the above substances was used effectively to correct the coagulation defect. They conclude that the temporary correction of this coagulation defect permits both emergency and elective surgery with relative safety in hemophilic patients. In addition, local hemostatic agents, the most effective being fibrin foam and thrombin, may be used at the operative site.

Physical therapy and carefully controlled orthopedic procedures may be utilized successfully in alleviating the frequently occurring hemarthroses (in 25.5% of group of 43 patients under study) when the coagulation time is maintained within normal values.

The rare development of a refractoriness in the lowering of the coagulation time by the use of one of the above-mentioned substances following repeated administration has been reported but was not observed by these authors.

Miss H. A. P. Marcroft

Prospects for Prevention of Chronic Bronchitis and Bronchiectasis. W. Finke: J. Pediat., **33**, 29-43 (July, 1948).

This article discusses fully the etiology of chronic bronchitis and bronchiectasis and challenges the still somewhat complacent attitude towards the prevention of chronic non-tuberculous pulmonary diseases.

During the last three years some 400 patients of all ages have been treated with penicillin aerosol therapy at the Genesee Hospital in Rochester. This paper analyses fifteen cases, all children, who had been ill for at least three months, who had been treated previously by various other methods with no appreciable improvements, who have been followed up for one year and on whom a diagnosis of subacute or chronic bronchopulmonary infection was established.

In patients with early infection, the respiratory symptoms usually subsided within a week and the tendency to relapse was less pronounced, recurrence of respiratory symptoms being easily controlled in mild cases by consecutive courses of treatment. In the presence of more advanced infection, the therapeutic effect of penicillin aerosol was less prompt and complete and relapses frequently occurred as soon as treatment was discontinued.

Prevention depends on recognition and eradication of the initial bronchopulmonary infection at the earliest possible stage. Penicillin aerosol treatment seems the best available for achieving this goal but follow-up treatment is as necessary in these cases of potential bronchiectasis as in cases of tuberculosis, rheumatic fever, etc. Prognosis for arrest with this treatment in definitely chronic cases is improved when bronchoscopic aspiration of bronchial secretions, postural drainage and prolonged convalescence form a part of the therapeutic program.

Public health measures, such as chest clinics, public convalescence homes and public education, should be used in attacking this problem.

Miss H. A. P. Marcroft

Carcinoma of the Pancreas: A Clinico-pathologic Survey. G. B. Silver, R. K. Lubliner: Surg. Gyn. Obst. **86**, 703-716 (June, 1948).

The authors studied 104 cases of carcinoma of the pancreas on which post-mortem examination were made in Montefiore Hospital between 1919 and 1946. These cases represented 3.8% of all autopsies of neoplastic disease during that period. Carcinoma of the pancreas was divided into that of (*a*) the head and neck and (*b*) body and tail. Their findings were: (1) Carcinoma of the body (42% of cases) is nearly as frequent as that of the head (55% of cases). (2) Males are predominantly affected by both types (1.8 males : 1.0 females). (3) Age incidence is highest for carcinoma of the head and neck between 51 and 60 years; for body and tail, 56-65 years. (4) Maximum incidence of death for carcinoma of head and neck is between 4 and 6 months following onset of symptoms, and for body and tail, 10-12 months. (5) Rapid weight loss is distinctly characteristic of carcinoma of the pancreas, especially that of the head. Pain was twice as common as jaundice as an initial symptom in cancer of the head and increases in frequency as the disease progresses. In cancer of the body, pain is the outstanding and unique feature of the disease, presumably due to pressure on the celiac plexus. Jaundice is not an early sign of cancer of the head and is absent in cases involving the body except late in the disease, occurring then because of extension to the head or metastases. (6) Short-circuiting operations for the relief of jaundice in carcinoma of the head appear to prolong life by a few months. (7) Gasto-intestinal complaints of a non-specific nature are prominent in the symptomatology of both types. They are due to pressure on and/or invasion of the pyloro-duodenal region. Metastases occur 3 times more frequently in carcinoma of the body than of the head. Diabetes and disturbances in carbohydrate metabolism are found in a high percentage of cases involving the body and tail, but infrequently in carcinoma of the head. Generalized abdominal carcinomatosis and venous thromboses are much more typical of carcinoma of the body.

Miss H. A. P. Marcroft

The Incidence of Primary Atypical Pneumonia of Unknown Etiology. J. R. Gallagher: Yale J. Biol. Med. **20**, (5) 473-479 (May, 1948).

The author chose for study the incidence of primary atypical pneumonia among students at a New England boarding school between September, 1935, and September, 1947. The data relate to a resident group of from 630 to 690 male adolescents. The author states that it seems very improbable that the disease is truly a new one; more likely it has only become more generally recognized due to a wider interest in etiology of acute pulmonary conditions and a more extensive use of *x*-ray. In this series of cases, neither laboratory nor epidemiological studies were sufficiently complete to permit positively eliminating any given agent as a possible etiological factor. No tests were done to determine presence of cold agglutinins.

There was a wide yearly variation in incidence, ranging from 2 to 40 cases yearly. Total number of cases in the 12 years was 149 with an average of 12 per year. There were no data to suggest an increase in incidence during the past few years. This type of pneumonia is most prevalent from October to June with occasional cases during the summer. November provided most cases, with October, February, January and April following in that order. The incidence of primary atypical pneumonia was eight times that of pneumococcal pneumonia during the same period. Only once did the disease assume epidemic proportions.

Miss H. A. P. Marcroft

SURGERY

The Problem of Parenteral Nitrogen Administration in Surgical Patients. A. J. Kremen: Surgery, **1**, 92-154 (Jan., 1948).

The means of supplying nitrogen to the poor-risk surgical patient by the intravenous route alone and maintaining him in positive nitrogen balance are considered. When the more preferable oral route of nitrogen administration is not available as in benign or malignant obstruction of the oesophagus or gastric outlet, chronic or subacute bowel obstruction, intestinal fistulae and the emaciated state of ulcerative colitis, parenteral nitrogen administration must be resorted to.

The effects of protein deficiency are hypoproteinemia (for every gram loss in total serum albumin, there is a concomitant loss of 30 gm. in tissue protein); decrease in blood volume; increased susceptibility to liver necrosis; decreased resistance to infection, trauma and toxic agents; and increased time for wound healing.

Protein may be administered parenterally as whole human blood, human or bovine blood plasma, enzymatic hydrolysate of casein (Amigen) or acid hydrolysate of case in (Parenamine). If sufficient plasma is given a positive nitrogen balance can be obtained although the plasma does not add to the blood volume, nor is it broken down to individual amino acids. Bovine plasma has proved unsatisfactory because of the high percentage (66%) of reactions. Amigen is given as a 5% solution with 5% glucose, 1,000 cc. containing 6 gm. of nitrogen.

Previous to this report it was thought that 1,000 cc. of Amigen solution daily was sufficient to restore protein nitrogen balance, but the author has demonstrated that urinary excretion of nitrogen rises to such an extent that negative nitrogen balance prevails. However, 3,000 cc. Amigen daily results in a satisfactory positive balance.

The augmented urinary nitrogen spillage subsequent to Amigen administration can be decreased by transfusing 500 cc. of blood daily. The resulting increase in blood volume is due solely to the added erythrocytes. If transfusion is continued for a sufficiently long period, a plethora will result. The protein of the red cell although not available during the life of the donor cell is then utilized with very little increase in urinary nitrogen excretion.

Nine case histories of poor-risk surgical patients with marked protein depletion are reported in detail. All nine patients had lost 20-33% of their body weight. One week of intensive, parenteral, pre-operative therapy, consisting of daily whole blood transfusions (500 cc.) supplemented by intravenous casein digest solutions in amounts up to 18 gm. of nitrogen (3,000 cc. Amigen), was found sufficient to maintain positive nitrogen balance without oral supplements. Poor-risk patients so prepared, in the opinion of the author, can be operated upon with risks comparable to similar uncomplicated cases.

R. W. Van der Flier

Indications for Pulmonary Resection for Tuberculosis Both by Lobectomy and Pneumonectomy. L. Crewer, F. S. Dolley and W. M. G. Jones: Diseases of the Chest, **14**, (4) 491-516 (July-Aug., 1948).

This discussion is based on the surgical management of over 1,000 cases of pulmonary tuberculosis during recent years. The authors state that resection has a definite place in surgical therapy by salvaging otherwise hopeless cases but thoracoplasty is preferred. Forty cases of pneumonectomy and lobectomy showed an overall mortality rate of 14-38%, early and late mortality of 27.5% and negative sputum on culture in 40-45%; whereas using thoracoplasty the mortality was less than 2%, negative sputum on culture in 65-80%.

When and if thoracoplasty fails, other therapeutic measures such as revision thoracoplasty, creation of an extrapleural space, packing and cavity drainage are first considered. Primary resection, however, is preferred in lower and middle lobe cavities, tuberculomata and blocked cavities, persistent bronchostenosis and symptomatic bronchiectasis.

The pathological pulmonary condition most amenable to pulmonary resection is characterized by fibroid and caseating lesions, in which spread takes place principally via the bronchial tree but the prognosis in these cases following thoracoplasty is usually just as good.

In the selection of any case for possible resection, attention should be paid to the pulmonary reserve. Contralateral pleural thickening, diaphragmatic paralysis, fibrosis, calcification and emphysema lower the breathing capacity. Resection is contra-indicated when: (1) the infection is hematogenous or lymphogenous; (2) contralateral tuberculosis is present, especially if unstable or (3) low pulmonary reserve has been demonstrated.

It is not solely technical skill that is lacking in the use of pulmonary resection but also inadequate assessment of the basic tendency of the disease in the selection of cases.

Miss H. A. P. Marcroft

Surgical Treatment of Peptic Ulcer. C. E. Gardner and D. Hart: Annals of Surgery, **127** (5) pps. (May, 1948).

The three main methods of treatment are listed and briefly discussed. First, gastroenterestomy—patients subjected to this operation are in the older age group with symptoms of gastric retention, pyloric obstruction and a duodenal ulcer. Mortality rate is 7.3% with 88% obtaining relief. Secondly, gastric resection —these patients are younger with an ulcer unrelieved by medical means, with recurrent pain, hemorrhage, stomal ulcer or possible malignancy. Mortality rate is 8.9% with 84% obtaining relief. However 6% show the "dumping" syndrome. An antral exclusion operation to reduce hyperacidity may supplement this. Thirdly, vagotomy —no specific selection of patients was used at first, 80% in general showing good results so far as the ulcer was concerned, but at least 50% had diarrhea or retention. Therefore it was concluded that this operation should only be used with a pyloroplasty and gastroenterostomy in the younger age group with a refractory duodenal ulcer, or in the case of a stomal or recurrent ulcer. It should not be used with hemorrhage, obstruction or a gastric ulcer.

Miss A. I. Scott

PEDIATRICS

Childhood Manifestations of Allergic Adults. A. B. Schwartz: J. Pediat. **33**: 202-207, (Aug., 1948).

The author studied the childhood characteristics of former pediatric patients who, as adults, were troubled with allergies in an attempt to discover any common childhood patterns.

The gastrointestinal signs most often noted in infants were hyperperistalsis, with or without pylorospasm, and frequent or loose, foamy stools. In some older children, they were recurrent attacks of abdominal pain and an unusual facility at vomiting. Pyloric stenosis was found to be relatively common in these children. In addition to such recognized allergic conditions as asthma, recurrent bronchitis and hay fever, he found that nasal snuffling, snorting or stuffiness, adenoid trouble, excessive mucous secretion and nosebleeds occured frequently. Skin conditions including dermatitis neonatroum, seborrheic dermatitis, infantile eczema, urticaria, atopic rashes, dermographism, canker sores, cheilitis, occurred fairly frequently, as did vasomotor lability, hydrolability and angiospastic pseudoanemia. Blepharitis, recurrent styes, angioneurotic edema, vernal and other conjunctivitis, localized pollenosis and itching formed the ophthalmologic signs and symptoms. Geni-

tourinary findings included vaginitis, vulvitis, enuresis, pruritis and hydrocele. Among the neuromuscular and psychomotor conditions noted were increased fatiguability, night restlessness and fears, compulsion neuroses, leg pains, blue hands and feet, migraine, alarm reactions and convulsive seizures. There was a relatively high incidence of enlarged thymus glands in this group of children.

G. A. Trusler

PSYCHIATRY

Psychotherapy in General Practice. S. Weiss: J. Amer. Med. Assn. **157** (5) 442-448 (May, 1947).

How can the general practitioner evaluate the relative importance of the emotions in the production and/or aggravation of symptoms? How can he avoid instituting or perpetuating neurotic manifestations? Dr. Weiss discusses these most important problems fully and interestingly. He emphasizes the need for a complete physical examination and the role of verbal interviews between physician and patient, for which adequate time must be allowed, and which must be based on a friendly, uncritical and sympathetic attitude of the physician. The concept of organ language is introduced and its use is psychotherapy illustrated.

We recommend this for individual reading by all medical students, both for the article's own merits and as an introduction to the book "Psychosomatic Medicine" by E. Weiss and S. English, as well as other texts on psychosomatic medicine.

Miss H. A. P. Marcroft

Neurosis and Religious Affiliation. E. Slater: J. Ment. Sci., **93**, 392-396 (Apr., 1947).

Of 13,556 serviceman of non-commissioned rank admitted to the wards of Sutton Emergency Hospital over two-thirds were admitted to the neuropsychiatric wards and the remainder to the general wards. Of the 9,354 neuropsychiatric patients, 70% (6,541) belonged to the Church of England. Taking this figure as a standard for showing whether members of other religious groups showed any preferential tendency for or against admission to neuropsychiatric wards (because 70% of the entire 13,556 also belonged to the Church of England), a figure was derived by dividing the ratio of the number of men of one denomination in the psychiatric series to 6,541 by the ratio of the number of men of the same denomination in the general series by 3,174 (the number of members of the Church of England admitted to the general wards). The results suggest that Roman Catholics and Methodists have a somewhat greater tendency to neurosis than members of the Church of England, that members of the Salvation Army have nearly three times and Jews over five times as great a tendency in this direction. By the last year of the war the proportion of Jews on the neurotic wards was over 34 times the proportion of Jews on the general side.

A. C. Parkin

Psychological Aspects of Obesity. Hilde Bruch: Psychiatry, **10**, 373-381 (Nov., 1947).

The large physical size of the obese person symbolically represents the need and desire for strength and security which he lacks in human relationships and the bodily expansion is a vicarious compensation for a thwarted personality development. The over-eating and underactivity associated in the production of obesity give a semblance of satisfaction which the fat person has not learned to achieve in more constructive ways. The outstanding psychological feature of these people is their emotional immaturity, the passive dependence and helplessness in meeting the exigencies of life. As a defense against anxiety or for immediate gratification, indulgence in food is used as a mechanism and this in turn evokes guilt and feelings of moral inferiority which lead to more eating. Adequate therapy must break this cycle and in doing this, cognizance must be taken of the patient's ambivalent attitude toward his condition: he wishes to do everything possible to correct it, and yet he cannot give it up as a defense mechanism. The therapist must lead the patient to insight of the real nature of the psychological problems involved and give sympathetic support in maintaining an adequate reducing diet. The use of endocrine products is strongly contra-indicated.

A. C. Parkin

RECENT ACCESSIONS TO THE MEDICAL READING ROOM

Adolph, E. F.: **Physiology of man in the desert.** 1947.
Advances in enzymology and related subjects, Vol. 7. 1947.
American Association for the Advancement of Science: **Approaches to tumor chemotherapy.** 1947.
Angers, A. F. L.: **L'Ecole d'infirmieres de l'Hopital Notre Dame, Montreal, 1898-1948.**
Annual review of microbiology, Vol. 1. 1947.
Armstrong, B.: **The health insurance doctor.** 1939.
Arruga, H.: **Cirugia ocular.** 1946.
Association for Research in Nervous and Mental Disease. **Research publications, Vol. 25—Military neuropsychiatry.** 1946.
Association for Research in Nervous and Mental Disease. **Research publications, Vol. 26—Epilepsy.** 1947.

Bancroft, F. W. and Wade, P.A. (Eds.): **Surgical treatment of the abdomen.** 1947.
Boyd, W. C.: **Fundamentals of immunology,** Ed. 2. 1947.
Boyd, W.: **Textbook of pathology,** ed. 5. 1947.
British Encyclopaedia of Medical Practice. Cumulative supplement. 1948.
British Encyclopaedia of Medical Practice. Medical progress. 1948.
Brown, J. A. C.: **Psychiatry for everyman.** 1947.
Bruel, L. and LeCoq, R.: **L'homme et l'acool.** 1946.
Brunner, H.: **Intracranial complications of ear, nose and throat infections.** 1946.
Burn, J. H.: **The background of therapeutics.** 1948.

Cameron, T. W. M.: **The parasites of man in temperate climates,** ed. 2.
Carlson, A. J. and Johnson, V.: **The machinery of the body,** ed. 3. 1948.
Chicago. Public health institute: **How laymen cut medical costs.** 1948.
Cold Spring Harbor. Biological Laboratory: **Nucleic Acids and Nucleoproteins.** 1947.
Congres Francais De La Penicilline (Paris, 1946), **Therapeutique par la penicilline.** 1947.

De Kruif, P. H. L.: **Kampfer fur das Leben.** n.d.
De Kruif, P. H. L.: **Kinder rufen nach uns.** 1936.
Drinker, G. K. and others: **Psychiatric research.** 1947

Engel, S.: **The child's lung.** 1947

Follis, R. H.: **Pathology of nutritional disease.** 1948.
Foot, N. C.: **Identification of tumors.** 1948.

Gardner, E.: **Fundamentals of neurology.** 1947.
Gates, O.: **A handbook for the diagnosis of cancer of the uterus by the use of vaginal smears,** ed. 2. 1948.
Granich, L.: **Aphasia: a guide to retraining.** 1947.

Harris, R. I.,and Beath, T.: **Army foot survey.** 1947.
Hodges, F. J. and others: **Radiology for medical students.** 1947.
Hull, T. G.: **Disease transmitted from animals to man,** ed. 3. 1947.

Inter-Allied conferences on war medicine, 1942-1945. 1947.

Jackson, H. and Parker, F.: **Hodgkin's disease and allied disorders.** 1947.

Karsner, H. T. and Koletsky, S.: **Calcific disease of the aortic valve.** 1947.
Kersley, G. D.: **The rheumatic diseases,** ed. 2. 1945.

Leake, C. D.: **Letheon: the cadenced story of anesthesia.** 1947.
Lewis, (Sir) Thomas: **Diseases of the heart,** ed. 4. 1948.

McBryde, C. M. (Ed.): **Signs and symptoms.** 1947.
McNair, J. B.: **The analysis of fermentation acids.** 1939.
Magitot, A.: **Physiologie oculaire clinique.** 1946.
Mandl, F.: **Paravertebral block in diagnosis, prognosis, and therapy.** 1947.
Michaelis, L. S.: **Anatomical atlas of orthopaedic surgery.** 1946.
Milch, H.: **Osteotomy of the long bones.** 1947.
Moreno, J. L.: **Psychodrama.** 1946.

New York Academy of Medicine. Committee on medicine and the changing order: **Medicine in the changing order.** 1947.
Northey, E. H.: **The sulfonamides and allied compounds.** 1948.

Pannett, C. A.: **Surgery,** ed. 2. 1947.
Pedersen, K. O.: **Ultracentrifugal studies on serum and serum fractions.** 1945.
Psychoanalytic study of the child, vol. 2. 1946.

Rorty, J. and Norman, N. P.: **Tomorrow's food.** 1947.
Rubin, E. H.: **Diseases of the chest, with emphasis on X-ray diagnosis.** 1947.

Sahyun, M. (Ed.): **Proteins and amino acids in nutrition.** 1948.
Schindler, R.: **Gastritis.** 1947.
Selye, H.: **Textbook of endocrinology.** 1947.
Shadid, M. A.: **A doctor for the people.** 1939.
Sheldon, J. H.: **The social medicine of old age.** 1948.
Sherman, H. C.: **Calcium and phosphorus in foods and nutrition.** 1947.
Spillane, J. D.: **Nutritional disorders of the nervous system.** 1947.
Sumner, J. B. and Somers, G. F.: **Chemistry and methods of enzymes,** ed. 2. 1947.

Van Hoosen, B.: **Petticoat surgeon.** 1947.

Williams, R. T.: **Detoxication mechanisms.** 1947.
Willis, R. A.: **Pathology of tumors.** 1947.

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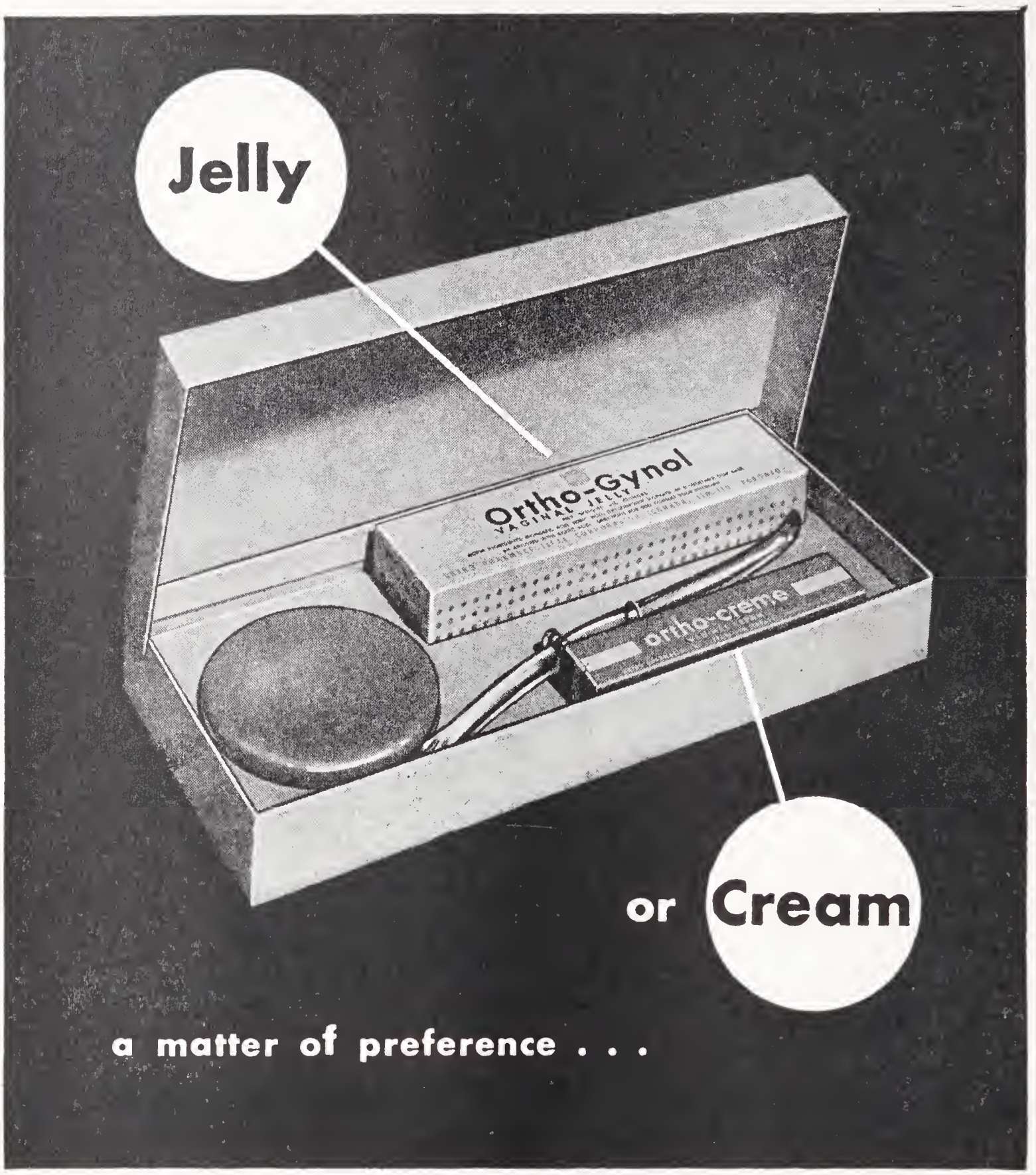

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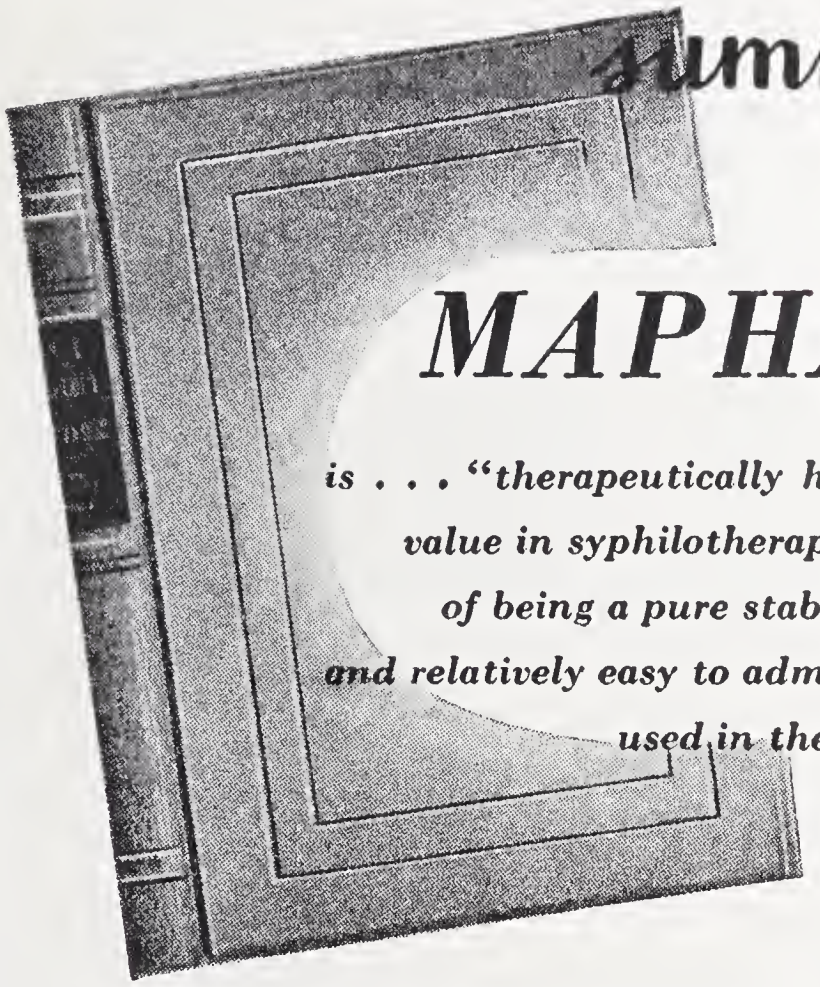

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*Cushny, A. R.: Pharmacology and Therapeutics, 13th Ed., Lea & Febiger, Philadelphia, 1947, p. 183.

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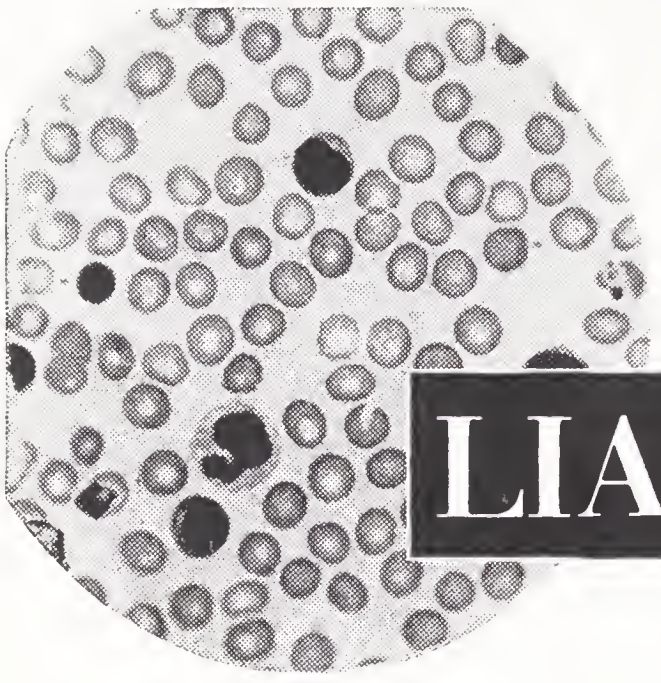

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